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Minor Experiences.

By a London Assistant.

THE last experience under this heading was by a Welsh assistant. The present one is by a London assistant who was brought up in the provinces. His manuscript has one grave fault, being written on both sides of the paper. The gravity is not serious in the present instance because the MS. extends to four pages only, and two compositors will set it up at their leisure. Doubtless many budding authors will read this, and for their benefit we may explain that the custom of writing for the Press on one side of the paper only is to assist the printers when a piece of composition has to be done quickly. Thus the MS. here printed can only be given to two compositors because it is written on both sides of the paper: had it been written on one side only it could be given to twenty, more or less, according to the time available for composition.

Having left my situation after being engaged in a good dispensing business in the North-West of London, I made up my mind to go to a well-known school of pharmacy in the South-East of London, and after a week's rest I left home with the intention of hard work.

Several new men were starting at the same time, and after a day or two I made up my mind to work with two other young fellows who, I could see, had made up their minds to work hard. As it turned out, we were all successful at our first attempt after a three months' course, but we all had the advantage of having worked steadily for some years, keeping the "Terrible Minor," as we imagined it, in the far distance. It is very important that a young man desirous of entering the ranks of the "pill-pushers" should do some reading, and if possible some practical chemistry, before entering a school of pharmacy. I found it a great help to myself when starting work to feel that I knew a bit about botany and materia medica; and an elementary knowledge of chemistry, and to know the names of parts of flowers, and "chemical definitions" is a great help.

With this knowledge, then, I commenced attending the lectures at the school, and in the afternoons devoted my time to practical chemistry, leaving at 5 p.m., and arrived home about 6, then settled down for the evening until about 11 p.m., when I was always ready for bed. From 6.30 in the morning until 8 I occupied in revision and attending to various odd subjects that always crop up. This was the daily routine until Saturday, when I felt it necessary to have some recreation, and accordingly gave over work about 3 p.m., and had a good rest until Monday, starting again and feeling more fit for work after the interval.

So the time came for the examination. Three or four other men whom I knew were up the same day from the same school. We were all ushered into the large hall and seated at tables, where we were supplied with envelopes, etc., upon which we were requested to put our names and addresses. After waiting a few minutes I was called out for dispensing. My paper included—

1. Pulv. rhei ... gr. iv.
Ft. pil. Mitte xviii. Argent.
2. Ung. zinci oleat ... ʒij.
3. Mist. ol. ricini, B.P. ... ʒvj.
4. Potass. iodidi ... ʒj.
Tr. belladonnæ ... ʒj.
Spt. æther. nit. ... ʒij.
Inf. aurant. ad ... ʒvj.
M.
5. Hyd. subchlor. ... gr. j.
Pulv. rhei co. ... gr. iij.
Sacch. lact. ... gr. j.
Ft. pulv. Mitte vj.

Starting off first with the zinc oleate, which of course had to be made fresh, and after getting that on the go, I proceeded with the pills, which, as luck would have it, turned out beautiful with the aid of S.V.R. Leaving them to harden I next made my emulsion; here again luck was with me, and a very satisfactory emulsion was made. Before putting it into the bottle it occurred to me that it would perhaps be more satisfactory to measure the bottle, and it so happened that it held very nearly 7 ounces, so I made my emulsion up to ʒvj. in the measure, and mentioned the fact to the examiner. Next came the mixture with the usual old "catch." I had not noticed the infusion at the bottom before this moment, so had to hurry up and get it on at once, using my neighbour's Bunsen, as my own was occupied in making the ointment. Having put my infusion on, and cooling as quickly as possible, I finished off my pills which had been drying, then the powders, and next

the mixture, with which I was not quite satisfied, and lastly my ointment, when it was just time to finish. Meeting my friends outside, we retired to a restaurant close at hand and talked over our morning's work, keeping as cheerful as possible under the circumstances.

Two o'clock arrived, and we were facing the music once more. I had a nice paper in chemistry; given a salt, to find out what it was, and prepare a crystalline specimen of the sulphate. It was $MgCl_2$, but it was some time before I found out, as it came down in the third group. My examiner asked me if I had found anything, and after explaining to him what I had done, he remarked that my method would not work, and gave me some help, after which I got on all right and started to make my crystals. I must confess it was a very small crop that was produced, and the examiner pointed it out to me as I was finishing, but I explained to him that they required to stand for a bit, when they would come all right. He only smiled. Volumetric analysis included bromine water, which came out rather low, so as I had time I made another estimation. That was the end of the first day, and I felt convinced that I was down, but after two days I had a notice to say I was to attend the oral examination about two weeks later. I was very pleased at the news, and started work again with more heart, as I felt that I had got my worst day over, being better up in theory than in practical work.

The second day came at last, and getting up to the Square about 1 p.m. to see how my friends were faring, I had to wait there more than an hour. It was a silly thing to do, as it is not at all encouraging to see other men come down. At 2.30 I was called to materia medica, where I was shown about fifteen specimens, including logwood, some oxidised (greenish tint) and some not, also aconitum napellus, with an inquiry as to the method of estimation, and several varieties of leaves, some of which I did not recognise. The next subject was chemistry, which was directed chiefly to the halogens, and after about ten minutes I was through another. Then I had a comfortable time, and felt quite at ease. My next subject was botany, where I did fairly well, but made a mistake in classing a fern among the algæ, really thinking it was a water plant. Then came pharmacy. I got an extract to recognise, which I could not, but that did not matter, as the examiner told me what it was, and asked me how it was made, and to explain the process. This led up to the Bramah press, and after drawing a rough sketch of it and explaining the action and answering a few questions on sterilisation, strengths, and the poison schedule, the examiner told me I could go to my next subject, which was prescription-reading. There I had to translate a prescription into full Latin, do a calculation, and had twenty scrips in full, with a few doses. At the end I was told by the examiner that I could go and sit down with an easy mind. After waiting about twenty minutes on the fuming form, my name was called out by the President, and seeing a broad smile on his face I guessed I had passed, and after the usual congratulations, etc., from him, left the Square about 4.30.

The examiners I found were perfect gentlemen, and instead of worrying me, as I was given to understand, they tried to help if they saw I had a fair knowledge of the work. I found that by treating them as gentlemen they treated me in the same manner, and had I been plucked I should have put it down to my own fault. (194/90.)

College Notes.

GLASGOW SCHOOL OF PHARMACY.—On April 24 (spring holiday) the students of this school (accompanied by Messrs. John Lothian, principal, and Peter Fenton) had a botanical excursion to Luss, Loch Lomond. Train was taken from Glasgow to Balloch, where the company detrained and walked up to Luss. The day was exceptionally bright, but owing to the recent inclement weather not many plants were in flower. After arriving at Luss tea was partaken of at the hotel, whence the company returned to Balloch by steamer. Glasgow was reached by 8.30 p.m., all having thoroughly enjoyed the outing.

WHERE TO STUDY.

THE FOLLOWING EDUCATIONAL INSTITUTIONS are advertising in this issue:

- School of Pharmacy, 17 Bloomsbury Square, W.C.
- Muter's School of Pharmacy, 325 Kennington Road, S.E.
- Westminster College of Chemistry, Trinity Square, Borough, S.E.
- Metropolitan College of Pharmacy, 160 and 162 Kennington Park Road, S.E.
- London College of Chemistry, 323 Clapham Road, S.W.
- Imperial College of Pharmacy, 49 and 51 Imperial Building, Ludgate Circus, E.C.
- Royal Dispensary, 21 West Richmond Street, Edinburgh.
- Liverpool School of Pharmacy, 6 Sandon Terrace, Liverpool.
- Edinburgh School of Pharmacy, 26 Clyde Street, Edinburgh.

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost £1, obtainable through any money-order office.

(From the "Trade-marks Journal," April 5, 1905.)

- Label with castle and leaf devices; for salt. By the Salt Union, Ltd., Carrickfergus. 267,833.
- "COCOLAX" ("Coco" disclaimed) and design of a marine fort; for a mixture prepared from cocoa. By G. Bright, Dudley House, Madeira Road, Sea View, Isle of Wight. 268,325.
- Heraldic device of a stork and crown; for salad oil. By J. & T. H. Staples, Ltd., 28 Margaret Street, London, W. 268,923.
- Label device of a man and woman in old-fashioned dress; for treacle toffee. By J. Mackintosh, Ltd., Queen's Road, Halifax. 269,139.
- Device of a fort and two soldiers; for mineral and aerated waters. By Plowman & Co., Ltd., 65 Jamaica Road, London, S.E. 269,088.
- "OZALA"; for natural mineral medicinal waters. By A. Havelock-Allan, Blackwell Manor, Darlington. 269,293.
- "LIMFIZZ"; for an aerated beverage. By Ray & Son, Ltd., Ogle Street, London, W. 270,530.
- "SALSOMA" ("Salso" disclaimed); for mineral and aerated waters. By the Hydro Hotels Syndicate, Ltd., 69 Mark Lane, London, E.C. 270,652.
- A tin-label with scroll devices; for a tooth-powder. By W. Gordon, 35 Frohisher Road, Hornsey, London, N. 269,908.
- "CECILE"; for perfumery. By Lever Bros., Ltd., Port Sunlight, Cheshire. 270,335.
- "KEE-VEE"; for blacking, and polishes, pastes, etc., for furniture, metals, and other articles. By Allingham & Co., 30 North Street, Belfast. 269,116.
- "SHAMROCK" and shamrock device; for polishes. By Malone Bros., 69 Great Strand Street, Dublin. 270,470.
- "SOLASTUS"; for a leather waterproofer and preserver. By Priscilla Waite, 6 Cobwell Road, Retford. 270,552.
- "IRO"; for polishes. By the City Polish Co., 121 West Derby Road, Liverpool. 270,708.
- "CLARISENE"; for polishes. By A. Britenall & Co., 11 Tabley Road, Holloway, London, N. 270,745.

(From the "Trade-marks Journal," April 12, 1905.)

- "TONIX" ("Tone" disclaimed); for photographic chemicals. By J. J. Griffin & Sons, Ltd., 20 Sardinia Street, London, W.C. 270,620.
- "EIDELER"; for photographic chemicals, apparatus, and paper. By R. & J. Beck, Ltd., 68 Cornhill, London, E.C. 270,902, 270,903, 270,498.
- "SOTOR"; for chemicals. By R. Avenarius & Co., 25 Kreuzerstrasse, Stuttgart, Germany. 271,003.
- Device of Red Riding-hood and the wolf; for chemicals. By J. H. A. Brüggmann, Vogelreth 6, Hamburg. 271,273.
- "ETTIFAL"; for chemicals and perfumery. By L. Lafitte, 39 Upper Berkeley Street, London, W. 270,567, 270,568, 270,569.
- "KING SOL"; for veterinary medicines. By Josephine M. Duncan, Little Fair Lawn, Castle Donington, Leicestershire. 270,655.
- "BRONKENE"; for a medicine. By A. H. Ross, 13 Strathmartine Road, Dundee. 269,612.
- "PROPNAL"; for a chemical. By E. Merck, Frankfurterstrasse 220, Darmstadt. 269,787.
- "OXYCHLORO"; for chemicals and toilet articles. By Oxychlorides, Ltd., Winchester House, Old Broad Street, E.C. 270,809, 270,811, 270,812.
- "CARIJAPAN"; for medicated toilet and sanitary papers. By McI. J. D. Carter, 27 Well Street, Hackney, London, N. 270,904.
- "LIANSULPHOIDS"; for chemicals. By W. W. Johnson, 2 High Street, Llandrindod Wells. 270,961.
- Device of a human nose; for an aid to breathing through the nose. By Murray & Co., 117A Great George Street, Liverpool. 270,660.
- "COMOLCO" and olive branch device; for oils. By the Comestible Oil Co., 36 Greenwood Road, Dalston, London, N.E. 270,360.
- YUBERTAS yeast food. R. & G. Boby Bros. & Chapman, Ltd., 10 Great Eastern Street, E.C. 270,405.
- "OXYGENOL" ("Oxigeno" disclaimed); for a washing preparation. By the Deutsche Gold- & Silber-Scheide-Anstalt, vorm. Rössler, 4 Schneidwallgasse, Frankfurt-on-Main. 270,496.

- "PROXYLEN"; for a bleaching-preparation. By the Deutsche Gold- & Silber-Scheide-Anstalt, vorm. Rössler, 4 Schneidwallgasse, Frankfurt-on-Main. 270,497.
- "LAVANDINE," "LAVANDO," and "LAVANDONE" ("Lavande" disclaimed); for candles, soap, detergents, etc. By J. Travers & Sons, Ltd., 119 Cannon Street, London, E.C. 270,614, 270,615, 270,616.
- "WILLIAM TELL" and device of William Tell; for candles, soap, detergents, etc. By H. Becker, 105 Upper Thames Street, London, E.C. 271,035.
- "ALICIA"; for perfumery. By E. Cook & Co., Ltd., Bow, London, E. 270,060.
- "SILSOF"; for toilet-powder papers. By McI. J. D. Carter, 27 Well Street, Hackney, London, N. 270,633.
- "CALITAS"; for perfumery and toilet preparations. By the Gordon Hotels, Ltd., Hotel Victoria, Northumberland Avenue, London, W.C. 270,686.
- "EUTHAZEL"; for a toilet cream. By Parke, Davis & Co., 111 Queen Victoria Street, London, E.C. 270,801.

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor.

THE business of Mr. Oliver Vincent at Boscawen Street, Truro, has been acquired by Messrs. Pearce & Elford.

MR. ERNEST HENCHLEY, chemist and druggist, has opened a nicely fitted pharmacy at 49 Highland Road, Southsea.

MR. A. OLDFIELD, chemist and druggist, has opened a handsome pharmacy in the Station Road, Westcliffe-on-Sea.

MR. R. BARKER HILL, chemist and druggist, of Lincoln, has commenced business on his own account at 94 Linden Road, Gloucester.

MR. J. FURBER, chemist and druggist, has purchased the business of Mr. R. Hird, chemist and druggist, at 30 London Road, Gloucester.

THE Timothy White Co., Ltd., are opening a handsome new drug-store near the junction of Kingston Road and Lake Road, Landport, Portsmouth.

THE ERASMIC Co., LTD., of Warrington, in addition to their London office at 117 Oxford Street, have now opened a branch at 5A Coventry Street, W.

THE executor of the late Mr. W. A. Wood, chemist, Church Street, Hunslet, Leeds, has decided to discontinue the business, which is in the market for immediate disposal.

MR. OLIVER HUNTER, chemist and druggist, has purchased the business carried on at the Central Pharmacy, 44 Market Place, Wigan, by the late Mr. R. E. Kellett, chemist and druggist. Mr. Hunter has been connected with the business for fourteen years.

MR. CHARLES BALLARD BAKER, Ph.C., whose marriage is reported in this issue, was for some time with Messrs. Squire & Sons, Oxford Street, W., and has recently taken over the old-established business so successfully carried on by his father at Nuneaton.

MR. R. T. SIMPSON, chemist and druggist, of 21 Cheap-side, Lancaster, will shortly remove to the new premises which have been specially constructed for him at the corner of North Road and Church Street, on the site of the White Hart Hotel. Mr. Simpson is the popular Secretary to the Lancaster Amateur Photographic Society.

UNTIMELY DEATH OF A CHEMIST'S WIDOW.—In the Westminster Coroner's Court on Thursday, April 27, Mr. John Troutbeck conducted an inquiry concerning the death of Margaret Davy (43), lately residing at 181 Beckenham Road, Penge, who died whilst under an anæsthetic. James Eakin, chemist, also of Beckenham Road, identified the deceased, and stated that she was the widow of a chemist, who was his partner. Mr. Thomas F. Toovey, house surgeon at the Royal Ear and Throat Hospital, spoke of admitting the deceased. It was proposed to operate on the right ear for the purpose of stopping a noise in the head, and to operate on the nose to relieve the breathing. The deceased was placed under an anæsthetic, and witness was getting the instruments ready when she ceased breathing. Artificial respiration and all the usual remedies were resorted to, but without avail. The jury returned a verdict of accidental death.

News from Abroad.

CINCHONA-CULTIVATION IN GERMAN EAST AFRICA.—The second annual report of the Imperial Biological Agricultural Institute of Amani for 1903-4 by Dr. A. Zimmerman, shows that the hybrids planted out reached the height of 2.2 metres. At the beginning of May 1903, 1,200 plants of hybrids sown out at Augusta in 1902 were planted out on the Bomole at a height of 900 metres. They had already reached a height of 1.5 to 2 metres. Some of the plants sown out in February 1903 developed into plants fit to be removed during the rainy season. For this purpose two pieces of land on the Bomole have been put in order by rooting out a portion of the dense virgin forest. Plants of *Ledgeriana* will be put about 1,000 metres high, and a little lower down hybrids, and later *Succirubra* will be planted. Although thousands of plants have already been distributed among the proprietors, there are still on the seed-beds 10,000 *Ledgeriana* plants and about 3,000 hybrids. In December 1903 the Biological Agricultural Institute obtained some *Succirubra* seed from Java, which has germinated well, and will yield at least 10,000 plants. The intention is to bring the number of cinchona-plants up to 30,000, beyond which the Institute cannot go for want of land at suitable altitudes.

GERMAN POTASH SYNDICATE.—Since the new five-years' agreement came into force on January 1, 1905, a considerable extension of business has taken place, the sales effected by the syndicate this year already representing a turnover of from 350,000*l.* to 400,000*l.* in excess of sales during the corresponding period of last year. The future prospects are also considered favourable, but fresh competition, stimulated by the success of the syndicate, will have to be faced shortly, as thirty new potash-works, outside of the syndicate, are in course of preparation. The working results of a few undertakings in 1904 as shown by the reports recently issued are satisfactory—the Ascherleben works, for instance, having earned a net profit of 73,000*l.*, out of which it has paid a dividend of 10 per cent.

SPANISH SPIRIT TRUST.—This organisation, which has been referred to on several occasions in the *C. & D.*, is the subject of an American consular report by Mr. B. H. Ridgely, of Barcelona, who gives full particulars concerning the trust. In a letter to the Consul, the director of the trust briefly explains its objects, the principal of which is the acquisition of molasses or dregs from the National Sugar Co., and the production of alcohol therefrom on a cheaper scale. There are fifty-four industrial alcohol factories, and up to the present thirty-one of them form part of the trust, the most modern and important establishments being included. The annual production of industrial alcohol is calculated to be 600,000 hectolitres (15,850,200 gals.). At present industrial alcohol in Spain is used almost exclusively for heating, but the purpose of the trust is to bring it into general use for light and power. It has been proposed to invite the distillers of alcohol from wine to join the combine, but this would necessitate a very large increase in capital, and the difficulty of harmonising the interests of the innumerable small distillers throughout the country would, it is thought, prove almost insurmountable.

GERMAN MEDICINE-TARIFF.—There is now at least one apotheker in the Fatherland whose views on the new tariff would probably be, though to the point, unfit for printing, and he certainly regards this new "symbol of the German unity" as a very doubtful acquisition. In a letter to the "Pharmaceutische Zeitung," an apotheker writes that he was in the habit of supplying a local hospital with a carboy containing 60 litres of distilled water for which, by special agreement, he charged 4.80*m.* = 4*s.* 10*d.* (the price for a litre of distilled water according to the former tax was 25*pf.* = 3*d.*). At the same time he supplied a concentrated solution of corrosive sublimate with sodium chloride, which at the hospital was diluted by the doctor. When the new tariff appeared, at the beginning of this month, the apotheker received the empty carboy accompanied by the doctor's prescription calling for:

Sol. chlor.	10 grams
Aq. destill.	60 kilograms
M.d.s. For external use.	Dr. N. N.

The apotheker remarked that he would make no charge for the small addition of salt to the distilled water, and pro-

ceeded, as usual, to book 60 litres of distilled for 4*s.* 10*d.* with the salt added. However, the hospital doctor very bluntly referred him to the new Imperial tariff, according to which the above prescription may only be charged as 55*pf.* or 6½*d.*; and as he was bound by contract to give the hospital 25 per cent. discount, the actual charge was reduced to 38*pf.*, or 4¾*d.* This state of affairs is in consequence of the new tariff introducing an inclusive charge for dissolving salts, including the necessary water, whatever quantity may be prescribed. This prescription of course means money out of the apotheker's pocket, and yet he has absolutely no redress, for if he tries to make a higher charge than allowed by the tariff he is liable to a fine not exceeding 7*l.* 10*s.*, or up to four weeks' imprisonment. In view of the existing strained relations between sick-clubs and pharmacists, the former, of course, will take every precaution not to forego any of the advantage they can derive from the new tax. But this case is certainly a peculiar example of the "benefits" conferred by a paternal bureaucracy!

Coming Events.

Notices for insertion under this heading should be received by Editor on Wednesday of each week.

Monday, May 1.

Society of Chemical Industry, London Section, Burlington House, Piccadilly, W., at 8 p.m. Professor Chiri Otuski will read the following papers: "The Study of the Action of Hydrogen Peroxide on a Photographic Plate in the Dark" and "On the Influence of the Length of the Time of Development on the Degree of Darkening of the Photographic Plate."

Dewsbury Chemists' Association, Church House, Church Street, at 8.45 p.m. Business, Council election and discussion on "Are British Pharmacists Decadent?"

Tuesday, May 2.

Midland Pharmaceutical Association, Grand Hotel, Birmingham. Smoking-concert.

Leicester Chemists' Association, Winn's Café, Market Place, at 8.45 p.m. Lantern-lecture by Mr. Lewis Rodhouse on "A Visit to Switzerland."

Wakefield Chemists' Association, White Horse Hotel, at 8.15 p.m. Messrs. Walshaw and Sargeant, Council candidates, will address the meeting.

Wednesday, May 3.

Wolverhampton Chemists' Association, "Star and Garter," at 8.30 p.m. Address by Mr. W. G. Cross.

Pharmaceutical Society of Great Britain, 16 Bloomsbury Square, W.C., at 11 a.m. Council-meeting.

Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, at 3 p.m. Council-meeting.

Stockport Chemists' Association, Albert Hall, Wellington Street, at 9 p.m. Ordinary meeting.

Thursday, May 4.

Leeds Chemists' Association, Grand Central Hotel, Briggate, at 8.45 p.m. Ordinary meeting.

Röntgen Society, 20 Hanover Square, W., at 8.15 p.m. Dr. C. Lester Leonard (Philadelphia) on "Measurement and Technique in Therapeutic Dosage."

Great Yarmouth Pharmaceutical Association, 156 King Street, at 8 p.m. Meeting to select Council candidates.

North Staffordshire Chemists' Association, North Stafford Hotel, Stoke-on-Trent, at 3.30 p.m. Annual meeting, followed at 5 p.m. by annual dinner. Mr. R. A. Robinson, President of the Pharmaceutical Society, will be present. Tickets, 6*s.* each, may be had from the Secretary, Mr. Edmund Jones, Hanley.

Chemical Society, Burlington House, Piccadilly, W., at 8 p.m. The papers to be communicated are "The Synthesis of Substances Allied to Adrenaline," by Mr. H. D. Dakin; "Methylation of P-aminobenzoic Acid by means of Methyl Sulphate," by Mr. J. Johnston, etc.

Brighton Association of Pharmacy, 58 King's Road, at 9 p.m. Business, Council election and B.P.C. visit.

Friday, May 5.

Royal Institution of Great Britain, Albemarle Street, Piccadilly, W., at 9 p.m. Professor H. E. Armstrong on "Problems Underlying Nutrition."

THE annual dinner of the Pharmaceutical Society of Great Britain will be held at the Whitehall Rooms, Hôtel Métropole, on May 16. Tickets may be had from the Secretary of the Pharmaceutical Society, 16 Bloomsbury Square, W.C.

COMPLIMENTARY dinner to Mr. T. Tyrer in recognition of his services on the question of untaxed alcohol for manufacturing purposes. Trocadero Restaurant, May 25. Tickets (one guinea each, including wine and cigars) from Mr. K. B. Murray, Oxford Court, Cannon Street, E.C.

Exchange Column—Bargains.

TERMS.

1¹/₂ d. per word with name and address. 1d. per word if we register the address and attach a number.

No Advertisement inserted for less than 6d.

Limited to the Advertisements of Surplus Stock, not of a Wholesale character, of Shop Fittings (secondhand), Apparatus, Photographic Goods, Books and Periodicals, Formulae, Addresses Wanted, and Articles Wanted.

DEPOSIT.—The purchaser of anything advertised in the Exchange Column may remit the amount to us, and we only pay the money deposited on advice from the remitter. We charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount, which is payable by the purchaser.

Remittances payable to EDWARD HALSE, and crossed MARTIN'S BANK, LIMITED.

Results prove that it pays to pay for advertising in the "Chemist and Druggist Supplement."

Read the following:—

"I inserted recently two small advertisements in THE CHEMIST AND DRUGGIST Supplement, total cost 3s. 6d. I have sold through them £10 2s. 3d. worth of goods and had replies from Sheffield, Leeds, Cavan, Louth, Bedford, Warrington, Croydon, Bristol, Oxford, and the Emerald Isle, beside callers from Finchley, Thornton Heath, Commercial Road, Poplar, Blackheath, and the City.

"J. C. THOMPSON." (199/68.)

FOR DISPOSAL.

APPARATUS.

Tincture press, 1 gall.; Maw's fig. 1895; good condition; £1. WADE, Chemist, Sidcup.

Tablet machine (run by power), makes $\frac{1}{4}$ in. to $\frac{1}{2}$ in.; price £48; will take £34. VINCENT, 344 Old Street, E.C.

X-ray apparatus; complete set, almost new, by Harry Cox, Ltd.; can be seen by appointment any evening. Address, "X-RAY," 56 Wandsworth Bridge Road, S.W.

For sale, upper and lower wisdom, upper molar, right stump forceps (Maw's); very little used; 3s. each; key, with 4 claws, 1s. 3d. 245/23, Office of this Paper.

BOOKS AND PERIODICALS.

Muter, Atfield, Roscoe, Bentley, and a number of text-books to be sold at nominal price. MASON, 45 Kidderminster Road, Croydon.

DRUGS AND CHEMICALS.

Garlic, fresh, perfectly sound; overstocked: about 7 cwt.; 14s. 6d. cwt. gross. Address, "J. F. S.," 27 Eldon Street, London, E.C.

Would exchange two original bottles ol. verbenæ for two original bottles ol. menth. pip. Hotch. or other drugs. BARNARD, 309 Hackney Road, N.E.

FORMULÆ.

Complete set of rare and valuable formulas suitable for manufacturers of essences; to the mineral trade, confectionery, quinquessences, &c.; all practical, genuine, and reliable. For price and terms apply, 249/24, Office of this Paper.

OPTICAL AND PHOTOGRAPHIC.

Photographic mounts, 1,000 plain C.D.V., 4s.; 500 plate sunks, 8x6, for quarter-plates, 12s. 6d.; 500 slip-in quarter-plates, 12s. 6d.; and others; samples, three stamps. EDWARD PECK, East Dereham, Norfolk.

High-frequency and x-ray outfit, by Dean; 220-volt, continuous, 15-in. coil; new January twelvemonth; little used. 241/2, Office of this Paper.

PROPRIETARY ARTICLES.

1½ doz. Maltico, 1s. 6d.; ¾ doz. Cremalto, 1s. 6d.; what offers? SMITH, Branksome, Bournemouth.

Overstocked.—About 4 gross 1s. Okis gold-enamel; any quantity 4s. doz., 45s. gross, carr. paid; sample 9 stamps. GREEN, Chemist, Swindon.

2 doz. Bile Beans at 11s. 6d.; 1 doz. 2s. 9d. ditto 25s.; 1 doz. 2s. 9d. Williams' at 23s. 8d.; carriage paid; cash with order. "CHEMIST," 168 Grove Lane, Handsworth, Staffs.

SHARES.

Shares for Sale.—See p. 69.

SHOP FITTINGS.

Two pear-shape carboys; 6 gallons; 3 3 ft. 3 in. standard bars; what offers? PEAKE, Barnet.

O'Brien's Voucher Till; perfect condition; never used; cost £8 8s.; what offers? GRAY, 5 High Street, Barues.

Complete fittings for Chemist's shop, 18 feet square. Send full particulars and lowest price, "CHEMIST," 80 Pemdevon Road, West Croydon.

Two mahogany ebonised outside wall cases, 40 x 30, cost £2 10s. each, take £1; suit optician, photographer. Photo and details, Lowe, Chemist, Arklow.

MISCELLANEOUS.

Railed desk, as Southall's No. 6; 25 x 25 x 20; offers. SHAW, Doncaster.

Typewriting-machine, similar to Yost pattern; good working order; price £6 10s. H. & Co., 127 Fenchurch Street, E.C.

Leather medicine-wallet, Maw's fig. 2309; bell-metal mortar and pestle; "Enterprise" drug-mill. 245/39, Office of this Paper.

Bed-rest, Carter's; detachable arms, head-rests; almost new; walnut, upholstered, covered chintz; cost £3; bargain, 30s. SPENCER, 18 Griffith's Road, Wimbledon.

Gilded wooden letters, 21 inches deep, "cash drug store," complete with irons; pill and cachet machines; carboys; Watson & Wate's 1s. pills and tinctures. DENT, Oulton Broad.

WANTED.

Optician's trial case; must be good make. MOUNTAIN, Ph.C., Bicester, Oxon.

Small check-till, in good condition. "F. K.," 193 Kettering Road, Northampton.

Counter scales and weights wanted cheap. "BEE," 142 Bow Common Lane, E.

Spectacle show-case, about 1½ ft. x 3 ft., for outside pillar; state price. HOWLING, Chemist, Green Street, Forest Gate.

Flat dispensing-scales, "Climax" box pattern, glass top, accurate to ½ grain. Lowest cash offer, 11 Rose Crescent, Cambridge.

Homœopathic case, empty; surplus fancy and other labels; wall-fittings, 4 ft. long, 8 ft. high; window glass shelves. "CHEMIST," Broadway, Ashford.

Microscope (Bacteriological), surgical instruments; exchange "Encyclopaedia Britannica," Remington typewriter; "Linnean Journals." 243/5, Office of this Paper.

Glass-blowers and others.—Wanted, job smelling-salts bottles, well stoppered; must be very cheap. Send samples, with price. PERCIVAL, 171 High Street, Walthamstow.

"Chemist and Druggist," 1859-67; "Proc. Brit. Ph. Conf.," 1864-69; "Chem. Gazette," "Chem. News," "Proc. Chem. Soc.," "The Analyst," "Chemical Industry Journal." Offers to 235/20, Office of this Paper.

Chemist's shop-fittings.—Counter about 15 ft., with drawers; 17 ft. run of drawers, with fittings above; wall-cases and counter-cases, shop-rounds, scales (dispensing); also 2 lb. and 28 lb., with weights; pill-machine, mortars, &c.; secondhand. Lowest price to LERCH, Ironmonger, Bedford.



A Weekly Journal of Pharmacy and the Drug-trade
ESTABLISHED 1859.

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To Think over and Act on.

OUR readers are requested to note that the American, Canadian, and West Indian Issue of THE CHEMIST AND DRUGGIST has been fixed for Saturday, May 20. From reports just received from the States and Canada, it would appear that much business is being diverted to foreign channels through slacking of enterprise on the part of British firms at home. It is hoped, therefore, the opportunity we now present will be utilised by home firms for bringing forward their goods with special prominence. Canada has given good evidence of her desire to trade with Great Britain, and it is only needful for firms on this side to show her what they have to offer, to mutual advantage. The circulation to the countries named will be in addition to our usual distribution to subscribers at home and abroad. Applications for space should be addressed to the Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

Summary.

The subjoined paragraphs give the gist of the more important matters in this issue, with the object of showing at a glance what has happened during the week. See also "Contents" in the first column.

PLEASE refer to the Coloured Supplement in this issue for several columns of news items and coming events.

J. ISLIP is on the order path. Beware! (p. 675).

THE production of ammonia from peat has commenced in Ireland (p. 656).

SOME facts about how national money is frittered away are printed on p. 669.

A FREE ADVERTISEMENT is given to Books' Chemists' Boot Store on p. 670 of this issue.

DR. EDWARD DIVERS, F.R.S., is to be the next President of the Society of Chemical Industry (p. 664).

GLASGOW CHEMISTS have discussed how to improve and moralise the practice of pharmacy (p. 663).

MR. TRUMAN H. NEWBERRY, of Parke, Davis & Co., Detroit, is getting a place in the U.S. Government (p. 659).

MARRIAGE BELLS have been ringing merrily in the drug-trade this week. We give a column of announcements on p. 673.

No cheaper telegrams, no C.O.D. system, and no deferred postal orders, are the latest items from St. Martin's-le-Grand (p. 654).

A REPORT on the constituents of violet-leaves indicates that the drug may be more active than is generally supposed (p. 660).

MR. ROBERT YATES, pharmaceutical chemist, a former partner in the firm of Davy Yates & Routledge and its successors, died last week (p. 673).

PRICE-PROTECTION is in the air at present. It is making progress in Australia, France (p. 657), and in the United States (p. 659), as well as in the United Kingdom (p. 670).

THE TRANSVAAL PHARMACY BOARD'S REGULATIONS for registration as chemists in the Colony have been gazetted, and are epitomised on p. 658. They recognise the qualifications of Great Britain and Ireland.

MR. G. T. W. NEWSHOLME, speaking at Sheffield, discussed Mr. Jesse Boot's attitude to the Pharmacy Bill, and objected to the Minor being divided without a curriculum. Subsequent speakers dissented from him on the latter subject (p. 662).

DR. E. BERTÉ, the Messina chemical authority on lemon oil, communicates a lengthy paper in which he describes a new process for estimating aldehydes in lemon oil, and demonstrating polariscopically the purity or otherwise of any specimen (p. 682).

THE NEED for a standard poison-bottle was urged at an inquest held by Dr. Waldo, a Metropolitan coroner, in regard to a suicide from carbolic acid. The idea is that some well recognised and distinguishable bottle should be recommended by the authorities (p. 655).

AN Easter advertising campaign by Boots Cash Chemists, Ltd., takes the form of page displays in leading newspapers. The Pharmacy Bill and the Pharmaceutical Society are attacked, and in a companion page five domestic medicines are offered at cut-rates (p. 666).

IN OUR CORNER FOR STUDENTS the prizes this month go to Mr. W. P. Pailing (Birmingham) and Mr. C. P. Tavener (West Kensington). The tournament prizes are awarded to Messrs. A. H. Cleland (first), W. P. Pailing (second), and Sydney Smith (third). A progress prize is also awarded to Mr. Victor L. Blay (p. 652).

MR. JESSE BOOT'S MANIFESTO to the drug-trade has called forth several piquant rejoinders from chemists, which we print in our correspondence section. His companies' advertisements also suggest to correspondents the desirability of co-operation on a wholesale scale for the manufacture and distribution of specialities (p. 675).

MR. ROBINSON, President of the Pharmaceutical Society of Great Britain, in a speech at Bristol on Wednesday evening, replied to Sir Michael Hicks-Beach's objections to the Pharmacy Bill. Briefly, the President says that the qualification for a railway directorship is a money one, while that for carrying on the business of a chemist is by law required to be a qualification of brains (p. 661).

MARKET ALTERATIONS this week are few and slight, the holidays having had their usual restrictions on business. Refined Japanese camphor is 1d. dearer, cod-liver oil still exhibits a falling tendency, and copper sulphate and benzols are easier. Fixed oils are a feature this week, a considerable advance having taken place in turpentine, linseed, coconut, and cottonseed oils (p. 679).

Corner for Students.

CONDUCTED BY LEONARD DOBBIN, Ph.D.

Students, please note. All communications should be addressed to the Editor of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

All communications and reports must bear the names and addresses of the writers, not necessarily for publication. The reports of those who ignore this rule are liable not to be dealt with.

REPORTS.

THE powder distributed to students on March 29 consisted of equal parts by weight of calcium orthophosphate, sodium chloride, and ammonium bichromate.

The calculated composition of such a mixture is—

Ca	...	...	...	...	12.9
Na	...	...	...	...	13.1
NH ₄	...	...	...	...	4.8
PO ₄	...	...	...	...	20.4
Cl	...	...	...	...	20.2
Cr ₂ O ₇	...	...	...	...	28.6
					100.0

The powder also contained, as impurity, a small quantity of magnesium.

Samples of the powder were distributed to fifty-five students, and thirty reports were sent in for examination.

All of our correspondents were successful in detecting the presence of chromium as chromate or bichromate. The failures in the detection of the other constituents of the powder were: (a) Metallic radicals—Calcium, 14; sodium, 2; ammonium, 3. (b) Acid radicals—Phosphoric, 4; hydrochloric, 4.

There are often special difficulties in the analysis of substances containing both phosphates and chromium compounds, but these were not much in evidence and were not responsible for many errors in the present analysis. Such difficulties as were likely to arise in this connection were effectually avoided by those correspondents who first extracted from the powder all that was dissolved by cold water and separately analysed the solution of ammonium bichromate and sodium chloride so obtained, and then dissolved the portion insoluble in water (consisting of calcium phosphate) in hydrochloric acid and examined this solution also by itself. The aqueous solution was slightly acid, and in those cases where the powder had been boiled with the water the solution was found to contain the phosphoric radical in small quantity: nevertheless, this did not in any instance give rise to much difficulty.

The failure of nearly one-half of our correspondents to detect the calcium (present in the powder to the extent of nearly 13 per cent.) appears to indicate a serious flaw in their analytical procedure. The addition of ammonium carbonate to a somewhat dilute solution containing calcium salts does not always occasion the formation of an immediate precipitate of calcium carbonate, and in the presence of considerable quantities of ammonium salts a precipitate may not form even on standing for some time. When sodium or ammonium phosphate is added, however, a precipitate of calcium phosphate soon appears, and this is often mistaken for ammonium magnesium phosphate, although, being flocculent instead of crystalline, there is little excuse for its being so mistaken. When ammonium carbonate fails to produce a precipitate of carbonates of the barium-group, ammonium oxalate should be added and the mixture boiled before passing on to test for magnesium. When this is done the presence of calcium will be indicated by the formation of a precipitate of calcium oxalate. It seems more than likely that the omission to add ammonium oxalate before testing for magnesium led a number of our

correspondents to conclude that calcium was absent, and that the precipitate of calcium phosphate subsequently obtained led them to think magnesium was present in quantity and not merely as a trace. A few students failed to detect the presence of calcium owing to their having failed to recognise the powder as a phosphate mixture which required special treatment, and to their having mistaken for aluminium hydroxide the precipitate of calcium phosphate which the original hydrochloric-acid solution yielded when neutralised with ammonia.

A considerable number of students incorrectly reported potassium to be present. Some of these seemingly mistook the appearance of the ammonium bichromate for that of potassium bichromate, and concluded that potassium was present without applying any special tests, while others arrived at their conclusion after viewing through blue glass the coloration imparted by the powder to the Bunsen flame, overlooking the fact that this test should be applied after the removal of all the metallic radicals of the barium-group. It was the calcium flame which gave rise to the difficulty in the present instance.

Following up our general remarks of last month on testing for bromides, we specially devised for this month an exercise in which it would not be possible to make certain of the presence or absence of bromide without the application of some special test. Except in the cases of a very few students, these remarks were ignored and a reliable test for bromide was not applied, with the result that bromide was in many cases reported present and in many cases absent upon altogether insufficient evidence.

PRIZES.

The First Prize for the best analysis has been awarded to W. P. PAILING, Reservoir House, Icknield Port Road, Birmingham.

The Second Prize has been awarded to

C. P. TAVENER, 61 Blythe Road, West Kensington.

First Prize.—Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

1. Correspondents who are unqualified:

W. P. Pailing (1st Prize)	98	L.D.	...	...	80
C. P. Tavenor (2nd Prize)	96	Ambitious	...	...	77
Keiro	95	H. Stubbs	...	...	76
Embryo	94	Jo. By.	...	...	76
Pharmacy	90	Squill	...	...	72
X	90	T. M. M.	...	...	70
Kaolin	83	Phenazonum	...	...	69
Ozone	83	G. K. F.	...	...	63
Xenon	83	Hypo	...	...	62
Victor L. Blay	82	Brid	...	...	57
Maney	82	Aristol	...	...	43
Ronim	82	Paraldehyde	...	...	41

2. Correspondents who are qualified, or who have not stated that they are unqualified:

Conor	97	J. E. B.	...	...	72
Danwer	90	J. Hutchinson	...	...	62
G. S. Ph.	94	Norvic (non-competing)	...	...	96

TO CORRESPONDENTS.

C. P. TAVENER, AND MANY OTHERS.—You lost marks for not proving conclusively that bromide was absent. See this month's and last month's general remarks concerning the detection of bromide in presence of chloride.

KEIRO.—You appear to have overlooked the possibility of the aqueous solution of the powder (which was slightly acid to test paper) containing barium-group metals or magnesium except in combination as phosphates: at any rate you omitted to test for these metals in the filtrate from the precipitate produced in this solution on adding ammonium chloride and ammonia.

EMBRYO.—After the addition of ferric chloride to the acetate solution for the purpose of eliminating the phosphoric radical, the mixture should have been boiled. Your failure to obtain any precipitate at once in the cold at this stage may have been due to the presence of acetic acid in considerable quantity, or, what amounts to much the same thing, the ferric chloride solution may have contained a large proportion of free hydrochloric acid.

X.—Shaking up the powder with dilute hydrochloric acid and carbon bisulphide and noting that the latter remained uncoloured, did not prove the absence of bromide and iodide. With this particular mixture (containing a bichromate) concentrated hydrochloric acid would, however, have caused the liberation of chlorine (and therefore of bromine or iodine had a bromide or an iodide been present). Perhaps you inadvertently wrote "hydrochloric acid" in your report instead of "chlorine."

KAOLIN AND OTHERS.—In reporting upon work which is designed, amongst other things, to cultivate habits of accurate observation and description, it is neither desirable nor justifiable to refer to a precipitate of sulphur (formed, for example, by the action of hydrogen sulphide upon an acid solution of a bichromate) as "no precipitate" merely because it does not happen to consist of a sulphide of the copper-group or the arsenium-group. The facts that such a precipitate has been obtained and that it has been proved to consist of sulphur only are often of great analytical importance.

XENON.—The precipitate which you took to be aluminium hydroxide probably consisted of silicic acid derived from the potassium hydroxide solution you employed.

MANEY.—It is a common misapprehension that a light-coloured phosphate precipitate cannot contain iron. If you prepare some ferric phosphate by precipitation you will find that the precipitate is very nearly colourless.

LL.D.—It was quite impossible to conclude with certainty, by merely smelling the chromyl chloride, etc., evolved when the powder was heated with concentrated sulphuric acid, that bromide and iodide were absent.

AMBITIOUS.—Had the powder contained only the metallic and acid radicals which you report present, it would have dissolved completely in water. You do not give any information which enables us to understand how you failed to detect calcium.

H. STUBBS.—You looked for aluminium in the filtrate from a precipitate which you took to be chromic hydroxide; but had aluminium been present it would have been precipitated along with that chromic precipitate, and would not have passed through with the filtrate. Your analysis ought to have been carried out according to one of the special methods for dealing with phosphate mixtures insoluble in water.

JO. BY.—Your report is of a specially perplexing description. In several places it is impossible to determine whether you are describing what might conceivably happen, or what actually did happen, in the particular analysis in hand.

SQUILL.—It is a pity you did not try to confirm the supposed presence of a bromide by means of chlorine water and chloroform. As you may have observed last week, opportunities for analytical practice in connection with this column are still open to you, and somewhat simpler exercises are to be set.

T. M. M.—In testing for bromide by means of chlorine water and chloroform you found the chloroform to be "slightly coloured." Remember that chloroform dissolves chlorine (just as it does bromine) and thereby becomes "slightly coloured"; and be careful to add the chlorine water gradually and only in slight excess.

PHENAZONUM.—The deflagration which you attributed to the decomposition of a hypophosphite was due to the decomposition of ammonium bichromate.

G. K. F.—See the first sentence in each case in the replies to "Ambitious" and to "Squill." You mistook vapour of chromyl chloride for vapour of bromine.

HYPO.—Although you found a chromate to be present, the chromium seems to have disappeared mysteriously in the systematic examination for metallic radicals. As a matter of fact it was mostly "discarded" along with the precipitated ferric phosphate and basic ferric acetate.

BRID.—You omitted to give a summary of the results of your analysis. Such a summary is regarded as an essential portion of a report. See the concluding sentence of the reply to H. Stubbs.

ARISTOL.—The precipitate which you obtained on adding silver nitrate to the hydrochloric acid solution of the portion of the powder which did not dissolve in water, consisted of silver chloride.

CONOR.—Traces of calcium not precipitated by ammonium carbonate should be eliminated by means of ammonium oxalate before proceeding to test for magnesium.

G. S. PH.—You do not give any evidence in support of the statement that oxygen was given off when the powder was heated in an ignition tube. The gaseous mixture evolved really consisted mainly of water vapour and nitrogen. Try to make your process of analysis a little more systematic.

J. E. B.—Your evidence for the presence of a chlorate and a tartrate was unconvincing; and your failure to detect the phosphoric radical seriously marred your analysis.

NORVIC.—We think the differences you noted in the completeness of precipitation of chromium as hydroxide by means of ammonia depended upon the quantity of ammonia added in excess. Chromic hydroxide is distinctly soluble in excess of ammonia.

THE ANALYTICAL TOURNAMENT.

In our issue of September 24 last we offered a *First Prize* of books value 2l. 2s. and a certificate to the competitor who gained the highest aggregate marks for the six analyses during the months November 1904 to April 1905; a *Second Prize* of books value 1l. 1s. and a certificate to the competitor who gained the second highest aggregate; and a *Third Prize* of any two books published by THE CHEMIST AND DRUGGIST and a certificate to the competitor who gained the third highest aggregate. The analysis reported upon above is the concluding one of the tournament series, and we are now in a position to publish the names of the prize-winners. No fewer than seventy-five students took part in the competition, and every month a number of reports were received which exhibited a high degree of excellence. Taken as a whole, the marks obtained by the prize-winners this year are relatively lower than the figures for the last few years, and a feature which we note with some regret is that a number of promising competitors who entered the tournament in November dropped off during the winter instead of persevering to the close. Several of those who made a good beginning might reasonably have been expected to take a high place in the final list had they continued their efforts to the end of the competition.

The first place in the Tournament has been taken by "Danwer" (Mr. A. H. Cleland, 180 High Road, Leytonstone, N.E.), with an aggregate of 503 marks, being a "carefully-compiled" total made up of 84, 76, 81, 76, 96, and 90, and to him the first prize has been awarded.

The second place and prize are taken by "W. P. P." (Mr. W. P. Pailing, Reservoir House, Icknield Port Road, Birmingham), with an aggregate of 497 marks, made up of 65, 85, 84, 81, 84, and 98.

The third place and prize have been taken by "Pharmacy" (Mr. Sydney Smith, 43 Fentiman Road, Clapham Road, S.W.), with an aggregate of 495 marks, made up of 92, 85, 89, 69, 70, and 90.

We offer the above-named gentlemen our congratulations on the results of their careful work throughout the winter, and we shall be pleased to hear from them as to what books they desire.

In addition to these prizes we propose to give a "Progress Prize" to Mr. Victor L. Blay, of Claremont House, Walsall, whose marks for the six months are 27, 41, 77, 66, 84 and 82; indicating consistent improvement and perseverance, which deserve recognition.

Although a first-prize winner in a previous tournament, "Norvic" (Mr. Fred. J. Watt, Hingham, Norfolk), as a non-competitor, has sent in reports on the six tournament analyses. We desire to record here our very high opinion of the great excellence of these reports and to congratulate their author on the skill and resourcefulness with which he handled the difficulties of the various analyses. On no occasion during the winter was his score below 96, and his aggregate is 586.

THE NEW ANTI-COCAINE LAWS have just been secured in the States of Missouri and Minnesota, while a third is pending in the New York Legislature. Altogether about twenty of the forty-five States of the Union have now placed Acts of this kind upon their statute-books. The pharmacists of the country are determined to uproot the cocaine evil if it is possible to do so.

English News.

Local newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

A licence for the sale of wines has been granted to Mr. H. Stacey Hall, chemist and druggist, 119 Medlock Street, Manchester.

A motor-car ran amok in Warrington on April 18, and dashed into a chemist's shop in Bridge Street. Little damage was done to the pharmacy.

No drugs were submitted for analysis in Poplar last quarter, and in Stoke Newington the only sample analysed was one of cream of tartar, which was genuine.

A man named Lucas was charged at Tower Bridge Police Court on April 25 with attempting to murder his wife with ammonia. The woman has since died in hospital.

We gather from an advertisement in the morning papers that the efforts of the promoters of the Pharmacy Bill will be Bootless, especially if they succeed.—"Star."

An extensive fire occurred at the premises of Messrs. M. A. Aitken & Son, Beddington Corner, Mitcham, on April 25, but it has not interfered with business, which is being carried on as usual.

Mr. H. C. Richards gave notice on April 18 that on the second reading of the Pharmacy Bill he would move that it be read on that day six months. The Bill is down for May 5, eighth in the orders of the day. It is not likely to be reached.

Messrs. Harvey, Ltd., of Dublin, the veterinary specialists, present a cup for competition at the van-horse parade held in Regent's Park on Easter Monday. The judges were unable to decide this week which of two pairs of horses deserved the cup.

As an experiment, the Hampstead Guardians—who some time ago provided tooth-brushes for the workhouse children and arranged for them to be taught their use—have decided to purchase two gross of tooth-brushes for the use of infirm patients.

The Northumberland Licensing Committee have confirmed the medicated-wine licences granted by Magistrates to Mr. William Airth, chemist and druggist, of Earsdon Road, Shiremoor, and to Mr. Thomas Henry Mason, of Market Place, Morpeth.

The Spring Examinations of the Spectacle-makers' Company will be held at Caxton Hall, Westminster, on May 15, 16, 17, 24, 25 and 26. Application-forms should reach the clerk of the company, 11 Temple House, Temple Avenue, E.C., not later than May 7.

Nearly four years ago Mrs. Mayor, landlady of the Nag's Head, Accrington, drank a solution of caustic soda in mistake for beer. The alkali destroyed the membrane of the throat, and she died on April 25 as a result of the slow starvation caused by the contraction of the throat.

In connection with the earthquake in the Midlands the Grange, a mansion occupied by Mrs. W. T. Owbridge, widow of the deceased Sheriff of Hull, was shaken to its very foundations by what Mrs. Owbridge states were two shocks in quick succession resembling heavy explosions.

At the Tunbridge Wells County Court last week, judgment was obtained in an action against Mr. Joseph H. Aldridge, pharmaceutical chemist, of Clapham, S.W. (who formerly had a business at Tunbridge Wells), to recover 39l. arrears due to his wife under a voluntary maintenance deed.

The Halifax borough analyst (Mr. W. Ackroyd) reports that during the quarter ended March 31 he examined, among other things, three samples of sweet spirit of nitre; one of these was 52 per cent. below the minimum strength, another was 26 per cent., and the third was 16 per cent. One sample of paregoric was found to contain no opium.

At a meeting of the Portsmouth Board of Guardians on April 19, a member who had inquired, with reference to the employment of two boys in the dispensary, whether these youths were ever engaged in dispensing medicines, was informed that this was not the case, but that the two were employed principally in keeping up stock, taking in patients' bottles, etc., and cleaning up.

The Warwickshire County Council has lately adopted the practice of informing an offender against the Sale of Food and Drugs Acts that he has sinned and of asking for an explanation. Further samples are subsequently taken and an endeavour is made to arrive at the cause of the deficiency. This procedure is probably due to Mr. R. Hollick, chemist and druggist, who is a member of the committee appointed to see to the working of the Acts.

Contracts.

The Fareham Urban District Council have appointed Mr. W. O. Smith, chemist and druggist, to supply drugs, etc., to the Council for the ensuing year.

At a meeting of the Northfleet Urban District Council on April 19 the Sanitary Committee recommended the acceptance of the tender of Messrs. Millhouse & Lincoln, of Gravesend, for the supply of carbolated powder at 6l. 3s. per ton and "Sanitas" creocide fluid at 2l. 16s. per gross tins. It transpired that this was not the lowest tender, a wholesale firm having quoted at 6l. per ton for the powder and 2l. 14s. per gross for the fluid. It was urged that the local firm should have preference, a member remarking that it was a piece of audacity on the part of the wholesale firm to come in and undercut their local agents. Another councillor said he objected to the system of wholesale firms appointing agents in a locality and then undercutting them in price: that was not fair trading. The local tender was accepted.

Postal Matters.

The Postmaster-General (Lord Stanley), replying to a correspondent, says there is at present no likelihood of any reduction being made in the charges for inland and foreign telegrams. It is not at present proposed to introduce the cash-on-delivery system in the United Kingdom; but the question of introducing it between England and the British colonies and possessions and Egypt is under consideration.

The Postmaster-General likewise announces that on and from May 1 the facility of deferring payment of postal orders will be withdrawn. This facility was granted in the hope that it would tend to prevent the fraudulent negotiation of stolen orders; but it has proved of little value in this direction, and has been found, indeed, to lend itself to certain forms of fraud.

The Trunk Tragedy.

Arthur Devereux, chemist, who is charged with the murder of his wife and twin children at Stonebridge Park, N.W., again appeared before the Harlesden Magistrates on April 20. On the charge-sheet it was stated that among other things found on the prisoner when he was arrested were a tube of lanoline, a lozenge, fifteen pills, and two finger-stalls. No further evidence was taken. Counsel for the Treasury stated that the *post-mortem* examination and analysis had not yet been completed.

Industrial Alcohol Committee.

At a meeting of the Council of the Society of Chemical Industry, held at Palace Chambers, Westminster, S.W., on Tuesday, April 25, the report of the Industrial Alcohol Committee was laid before the members, and the following resolutions adopted:

This Council welcomes the report of the Industrial Alcohol Committee and Blue-book containing the evidence and appendices upon which the report is based, and resolves that a letter of thanks be sent to the Chancellor of the Exchequer for his action in appointing the Committee, and trusts that he may see his way to early legislation embodying the recommendations of the Committee.

This Council also desires to record its appreciation of the persistent efforts of Mr. Thomas Tyrer in the cause of industrial alcohol, and hereby tenders him its thanks for his services on the Industrial Alcohol Committee.

Bradford Drugs.

The Bradford City Analyst (Mr. F. W. Richardson) reports that during the quarter ended March 28 samples of drugs were analysed by him, and that of these 4, or 14 per cent., were reported as "adulterated." An infusion of cinchona and an orange-and-quinine wine contained only two-thirds the proper proportion of alkaloids. An ipecacuanha-wine showed only one-quarter the pharmacopœial quantity of emetine alkaloids, and a vinegar of squills contained only seven-tenths the official amount of acetic acid. A "citrate of caffeine" was classified as "doubtful," as it

showed only two-thirds the theoretical proportion of caffeine, and three baking-powders were also of doubtful character, as they contained amounts of lead varying from one-twentieth to one-tenth part of a grain of this metal per lb.

Birmingham Notes.

Mr. C. Lord, who at one time was an assistant at the Bull Street pharmaceutical establishment, has been relating in the "Birmingham Post" his forty years' experience of the local Volunteer force.

Mr. W. Corbett, chemist, Bromsgrove, has been appointed Chairman of the local District Council. He has acquired his old shop in High Street, which he formerly sold to Mr. Crooke, who has settled in Barnley, Lancashire.

At the memorial service at Carr's Lane Chapel in connection with the sudden death of Lord Mayor Berkeley, pharmacy was represented by Messrs. Thomas Barclay, J.P., J. F. Liverseege, M. O. Suffield, F. Barlow, and others.

The annual meeting of the local Association will be held early in May. The postponement is unavoidable owing to rush of business on the part of the energetic and courteous Secretary, who has been unable to find time to compile the annual report.

Dr. Davison, who has figured lately as an authority on earthquakes, is science master at King Edward's School, Birmingham. He has an instrument for recording "shocks," which consists of a sort of pendulum attached to a lever which in turn is attached to a revolving-drum recorder.

Sheffield Notes.

Mr. G. B. Owen, chemist and druggist, of Broad Street, has been elected a Vice-President of the St. John's, Park, Men's Club.

In the list of guarantees in connection with the visit of the Iron and Steel Institute to Sheffield this year appear the names of Mr. G. E. Scott-Smith, F.I.C., F.C.S., city analyst, and Professor W. P. Wynne, of the University College, who each subscribe 10*l.*, and Mr. G. T. W. News-holme, F.C.S., who is down for two guineas.

Mr. Arnold R. Tankard, F.C.S., head assistant on the city analyst's staff, has left to take control of the analytical and bacteriological laboratory of Messrs. Philip Harris & Co., of Birmingham. Mr. Tankard was for many years associated with the late Mr. A. H. Allen in connection with his "Commercial Organic Analysis," and he is now editor of that work.

The many friends of Mr. Herbert Antcliffe, the late local Secretary of the British Pharmaceutical Conference, will perhaps note that the volume on "Brahms" by "Mr. Herbert Antcliffe, of Sheffield," just published in Bell's Miniature Series of Musicians, is *not* by "our" Mr. Antcliffe. The curious coincidence of names has given the Sheffield Guardians' chief dispenser quite a reputation in the musical world, but although Mr. Antcliffe is, we understand, a secret performer on the violin, he would be the last to wish to take credit for work he has not done.

A somewhat heated controversy has been going on in the "Sheffield Daily Telegraph" for some little time now with reference to the Sunday Closing (Shops) Bill, but, curiously enough, every other exemption or prohibition has received attention except the chemist, until Friday last week, when a reverend correspondent, in the course of an epistle on the subject, said: "It is important to note that the Bill very properly provides that nothing therein shall prevent the sale by any chemist of any drugs, medicines, or surgical appliances on a Sunday." The battle chiefly rages round the tobacconist and the barber.

The Enterprising Burglar.

At Hull on April 17, a slater, named Swailes, was charged with breaking and entering the premises of Mr. C. D. Brighthouse, chemist, 350 Beverley Road, and stealing two cameras, six throat-sprays, and one hypodermic syringe, value 3*l.* The whole of these goods were found to have been disposed of to Mr. Batty, herbalist, Campbell Street, Hull, for 10*s.* The prisoner was further charged with breaking and entering the premises of Mr. W. H. Walton, chemist, 143 Spring Bank, and with stealing eleven photographic cameras, value 31*l.* The prisoner was found to be possessed of a complete set of skeleton keys, and he rented a room

about two miles from his residence in which to warehouse the proceeds of his nocturnal rambles. Priscner confined his attention to lock-up premises. In a third instance Swaites appropriated 2,000 cigars, a quantity of tobacco, pipes, etc., and as a reward for his diligence in these three cases he will take up his residence at a suburban establishment of his Majesty's for four months.

A Standard Poison-bottle Wanted.

At an inquest held at the City Coroner's Court on April 25, by Dr. F. J. Waldo, on the body of a young actress named Charlotte Redin, the evidence showed that deceased had committed suicide in the street by swallowing carbolic acid. William Henry Marsh, chemist and druggist, manager for Mr. E. Hugh, of Southampton Street, Strand, deposed to selling to Miss Redin 1 dr. of carbolic acid in one of the bottles produced. An assistant to Messrs. Vines & Froom, chemists, Aldersgate Street, E.C., who said he was unregistered, but under the supervision of a qualified manager, gave evidence of having sold to Miss Redin 3 dr. of carbolic acid (in a bottle produced). She said it was wanted for a lotion. The bottles produced in court were of different shades of colour, and had ridged surfaces. The bottles were in each case labelled "Poison," with the name and address of the seller, and in small lettering was the caution "Not to be taken internally." Dr. Waldo read to Mr. Marsh the Poisons Regulations, and Mr. Marsh said the difficulty was that there was no special poison-bottle indicated by the Pharmacy Act. He agreed with the Coroner that a standard poison-bottle was a necessity. It should be of a specified colour and easily distinguishable by touch, and it should also have a special cork or stopper, notched or roughened at the edges. If such a bottle were in general use there would be fewer inquests, especially as the result of poisons such as carbolic acid taken by accident. He further agreed with the Coroner that the scheduling of carbolic acid had materially reduced the number of deaths from that poison, and that poisons such as the mineral acids and ammonia could be bought at any oilshop, and were sold in any kind of bottle or vessel. Such poisons might also, said the Coroner, be usefully added to the poisons schedule. The jury returned the usual verdict, and added a rider in favour of a standard poison-bottle.

The Week's Poisonings.

Eleven deaths from poisoning have taken place since our last record, all being suicides. Carbolic acid was taken by the London actress Miss Redin, already mentioned, and by Thomas Coleman, of Portsmouth. Laudanum caused the deaths of Robert Cummings, a Hoxton house-agent (found dead in a field near Eastbourne) and Margaret Penson (62), a widow, at Scarborough. Alfred Hassan Medina, a laundry-manager at Haywards Heath, took cyanide of potassium; and Joseph Halpern, a German cigarette-maker, poisoned himself in a Whitechapel restaurant with a poison unidentified. A "preparation of a poisonous nature" caused the death of Sarah Ellen Bakewell (29), wife of a fireman at Masborough. Two cases of suicide by hydrochloric acid have occurred—one at Derby, where the corrosive acid was taken by Joseph Smith, a tinsmith, and the other at Leyton, where the poison was taken by a young man, named Varney, after attempting to murder his sweetheart. Sarah Deffern poisoned herself at Aston by taking salt of lemn. At an inquiry held at Gelli on April 20, touching the death of an underground mason's contractor named Sargeant, it was stated that deceased had committed suicide by taking prussic acid, which he had obtained on the representation that he wanted it to kill a cat. The Coroner, Mr. R. J. Rhys, expressed strong disapproval of the practice of giving poisons to people, no matter for what purpose. It was, he said, a reckless and improper thing to do. The jury returned a verdict of temporary insanity, and added a rider to the effect that greater care should be taken in supplying poisons.

THE exports of Japanese sulphur from the island of Hakodate during 1904 amounted to 18,193 tons (66,341*l.*) against 19,047 tons (66,891*l.*) in 1903. The United States took 45,260*l.* worth, Australia 12,120*l.* worth, Hawaii 5,858*l.* worth, the balance going to British North America.

Irish News.

A Horse-dealers' Trick.

At Ballybay Petty Sessions last week, the police summoned Thomas Berry, of Portadown, for cruelty to a horse, the property of Dr. R. A. Crawford, Castleshore, and James Wilkes, Leeds, was summoned for a similar offence. The chief witness was Mr. Wm. Dunwoody, pharmaceutical chemist, Ballybay, who stated that Berry bought bisulphide of carbon with which to rub a horse's leg. From the evidence of other witnesses it appears that the object of applying the bisulphide was to lame the horse and so induce the owner to accept a smaller sum for the animal, Wilkes being the person who made the offer. Berry was sent to gaol for three months and the case against Wilkes dismissed without prejudice.

Sheep-scab.

"Ialine" sheep-dip has been approved by the Department of Agriculture and Technical Instruction for Ireland as an efficient sheep-dip for sheep-scab for the purposes of the Sheep-scab Order, 1905.

Personal.

Mr. J. E. O'Neill, principal of the firm of O'Neill & Co., grocers and druggists, Maghera, Vice-President of the Londonderry County Council, District Councillor and Poor-law Guardians, is to be opposed at the forthcoming County Council election. Even his political opponents acknowledge that his services could ill be spared owing to organising and administrative abilities.

Guardians and Medicines.

At the meeting of the Lurgan Board of Guardians last week a letter was read from Messrs. White & Co., late medicine-contractors to the Union, threatening that unless an account for 3*l.* 19*s.* 4*d.* for unreturned empties is paid within seven days, their solicitor has instructions to proceed for the recovery of the same. The Clerk stated that the doctors all maintained that Messrs. White's empties have been returned.

Aiding the Surgeon.

Mr. R. Sunner, pharmaceutical chemist, Cork, to whose radiographs we recently referred, now sends us an excellent illustration of the use of x rays in kidney-surgery. A radiograph of a patient's kidney enabled an accurate diagnosis to be made of stone in the kidney, and also fixed the exact location. Mr. Sunner was present at the operation for removal of the stone and was congratulated on his successful use of the x rays.

Medicine-contracts.

The "Western People" comments on the action of the Local Government Board in not allowing the acceptance of the tenders of Messrs. Adamson & Co., Ballina, for surgical appliances. It is stated that Messrs. Adamson carry an ample stock of surgical instruments and appliances, and have, moreover, held contracts from Boards of Guardians for the last four or five years. The L.G.B. may yet change its mind as it did on the lowest-tender question.

Chemicals, Ltd.

An English company with the above title has commenced business near Belfast as extractors of ammonia from peat by a process discovered by Professor Wilhelm Eschweiler, of the Technical Hof Schule at Hanover, and Dr. H. C. Woltereck, of London. The company has acquired a lease of extensive peat-lands on the estates of Lord Herbert Vane-Tempest and Sir H. H. Smiley, Bart., on the mountains behind Carnlough, co. Antrim, and has for some time been erecting works there, which are to be ready for opening in June. The company's local engineer, Mr. C. C. Johnson, is supervising the erection of the buildings to contain motive-power and recovery-plant at a cost of 30,000*l.*, and an aerial ropeway two miles long for the conveyance of raw material from the bog to the works. In the past the great obstacle to the utilisation of peat for industrial purposes has been the difficulty of freeing it from its inherent moisture, but for the process to be set in operation at Carnlough the presence of moisture is an advantage. The peat-supply at Carnlough, which is on the sea-coast and has a harbour, is plentiful, and in addition to ammonia other by-products such as acetic acid and petroleum oil will be obtained.

Scotch News.

Business Changes.

A chemist's shop is shortly to be opened at Blackburn Buildings, Tolbooth Wynd, Leith, by Mr. E. T. Delamar, chemist and druggist.

Mr. James Halket, chemist and druggist, has acquired the business of the late Mr. John Innes, Ballater, and will carry on as from March 31, 1905.

Business in Edinburgh has been so poor recently that two pharmacies in the Abbey Hill district have been closed. As an offset three have been opened in the Warrender Park district, which was already well supplied.

Notice to Creditors.

With respect to the estate of the late Mr. Andrew Geddes, chemist, Camelon, the executor intimates that the state of his intromissions with the estate along with scheme of division thereof having lain at the office of Messrs. Japp & Yeaman, solicitors, Alyth, for inspection, he, failing objections thereto, will now divide the funds amongst the creditors.

Aberdeen Chemists and the Council Election.

A large and enthusiastic meeting of the chemists in Aberdeen and surrounding district was held in Robert Gordon's College on Tuesday evening, April 25, Mr. James Paterson in the chair. The occasion was an address by Mr. William Giles, a Council candidate. Mr. Giles expressed entire approval of the Pharmacy Bill, and said he is in favour of a progressive policy and would co-operate with other members of the Council in pressing the claims of chemists upon Parliament. He referred to the increasing number of companies practising pharmacy as an anomaly demanding urgent redress. He is in favour of some steps being taken to bring about a better understanding in regard to the Sale of Food and Drugs Acts, which would tend to prevent so many vexatious prosecutions for technical offences. He pronounced in favour of keeping up a high standard of education as the only means of obtaining proper recognition of the professional side of our calling, and said he is in favour of the division of the Minor examination and the acceptance by the Pharmaceutical Society of certificates from other examining bodies in the scientific subjects included in the Minor syllabus. At the close of his address Mr. Giles answered a number of questions and the following motion was put to the meeting and unanimously agreed to:

That this meeting of chemists in Aberdeen and district heartily agree to support the candidature of Mr. William Giles for election to the Pharmaceutical Council, and pledge themselves to forward in every way his election to the Council Board.

RADIUM.

Thomas J. Keenan addressed the members of the King's County Pharmaceutical Society, at its regular meeting, held yesterday afternoon (April 11), in the Brooklyn College of Pharmacy, Nostrand Avenue, on "Radium and Its Properties."—*The Brooklyn Citizen*.

MUSE Scientific, hump yourself, of Radium would I sing:
'Tis radium this and radium that and radium everything!
Not since the protoplasm prote and the human race began
Has anything SO EVERYTHING revealed itself to man.
They say 'tis good for cancer and excellent for fits,
The whole atomic theory's knocked to very little bits;
'Tis a painless panacea for every sort of ill,
It's knocked out paregoric and the little liver pill;
'Twill make the yellow man turn white, the negro man turn pink;
It's better than the Keeley Cure to kill the Demon Drink!
Unto the bald man's head it gives new interest and hairs,
'Twill make the cane to grow again in old splint-bottom chairs;
They're making breakfast food of it and new religions, too,
It's touted as a substitute for gargle oil and glue;
The blind are taught to speak again, the deaf no more are dumb,
And Bright's disease grows brighter now that radium has come;
It remedies the rheumatiz, the pink-eye and the mumps.
A glim or two turned into you will chase away the dumps;
It's the only explanation of the reason why the milk
Is in the cocoanut at all, the cocoon in the silk. . . .
And so on, according to Don R. Marquis, who writes this
alongside Mr. Keenan's lecture in the "Citizen."

French News.

(From our Paris Correspondent.)

BUSINESS CHANGE.—Mr. John Jarvis, jun., who several years ago opened a smart English pharmacy at Chantilly, Oise, not far from Paris, has sold the business and become the partner with the pharmacien's qualification in the business of the late Mr. H. H. Swann, in the rue Castiglione, Paris. Mr. Jarvis is the son of Mr. John Jarvis of Pau.

MUTUALIST PHARMACIES.—The opening of another mutualist pharmacy in France is now too common an event to merit notice, much less comment. But with regard to the one recently opened at Puteaux, a working-class suburb just outside Paris, it is stated that the Deputy (M.P.), who is a pharmacist, "gave his support to the project," although his own successor's pharmacy is but fifty yards away. The pharmacist alluded to is said to be M. A. C. Ferrand, who became a pharmacist in 1872. In due course he joined the Municipal Council of Puteaux, and in 1902 was elected one of the Deputies for the parliamentary district of St.-Denis, which includes Puteaux. M. Ferrand's action in supporting the mutualist pharmacist is perhaps an electioneering move to curry favour with the working-classes, but his successor probably is far from appreciating the benefits of such close and keen competition.

PRICE-PROTECTION IN FRANCE.—The Lorette plan of price-protection adopted by several important firms seems to have worked well enough so far as it goes. It would, however, appear that the organisers consider that they have reason to complain that while pharmacists sell at the prices agreed they do not always refrain from substitution. They have accordingly issued a circular asking each pharmacist to sign an agreement not to substitute. The leaders of the "Federation of the South" and of the anti-specialist crusade strongly advise their members not to accept any such agreement. They deny that prices are effectually protected, and insist that certain pharmacies selling below the prices agreed are left unmolested. Some add that the manufacturers' advertisements, "Refuse inferior substitutes often offered by pharmacists" and the like, are gratuitously insulting, and call for retaliation. It is of course difficult to form an accurate opinion as to exactly how far the manufacturers are justified in their proceedings, or as to exactly how much substitution goes on. What all must regret is the still yawning breach between Paris and the Southern manufacturer and retailer, etc., which prevents any effectual corporate and united action being taken on this or any other question.

CLOSE COMPETITION.—A correspondent writes from Moulins-sur-Allier: One usually imagines that the keenest pharmaceutical competition is to be found in the bigger cities, but some of these small country towns are conspicuous in this way. One of the most striking examples I have seen is here at Moulins, an agricultural centre of some 20,000 souls. Not fifty yards from the hotel where I write is a little "place," or rather a mere intersection of two unimportant streets, of which two rival pharmacies occupy the opposite sides. The Pharmacie Normale is run by an ex-chemist of the Paris Municipal Laboratory, and the Pharmacie Regionale by an ex-interne of the Paris hospitals, and they are so directly opposite each other that each proprietor can readily see all that goes on in his opponent's premises. Needless to say, under these circumstances there is a commercial air about both which is unmistakable. But one contents himself with the liberal (window) display of showcards and the conspicuous array of patents to which we are accustomed in England. The other places, not only in his window, but all along the sales counter, price-cards plainly legible, not only from the outside, but from the roadway. Pink Pills at 2f. 45c., Tisane de shaker at 3f. 30c., and the rest to suit. The exceptional feature of this particular case is that these rival establishments in such close proximity are not placed—as these commercial pharmacies usually are—on the Grand Place or near the public markets, but in what one may term by comparison a side-street. There is much commercial enterprise evident at Moulins, but the great shopping streets—the rue de l'Allier and the place de l'Allier—are a little further away.

Australasian News.

Communicated by the Australian Staff of "The Chemist and Druggist."

New South Wales.

THE N.S.W. CHEMISTS' ASSISTANTS' ASSOCIATION in February considered the question of continuing or dropping the work of the Association, but ultimately decided to keep going. The subscription was reduced to 2s. 6d. per quarter, with no entrance-fee. Mr. J. G. Tingle was elected President, Mr. W. Reid Vice-President, Mr. Warren Treasurer, and Mr. W. A. Pratt Secretary. A picnic was arranged for Easter.

Queensland.

DESTROYING PRICKLY PEAR.—A new method of destroying prickly pear is being tried on the Darling Downs. A number of mirrors reflecting the rays of the sun are focussed on one particular clump of the prickly pear. In the first experiment the prickly pear on which the mirrors were focussed shrivelled up and died in a few moments.

THE MAYOR OF SOUTH BRISBANE is, like his *confrère* at Melbourne, a pharmacist. Mr. John Davies, the newly elected Mayor, who has been in business in South Brisbane for eighteen years, is a native of Herefordshire, and went out to Queensland some twenty years ago. He is a member of the Council of the Queensland Pharmaceutical Society, and takes a keen interest in municipal matters.

Victoria.

CHEMISTS' PROPRIETARIES.—The prospectus of the proposed company which is to manufacture proprietary articles solely for chemists' sale was issued on January 26. The name is to be W. E. Bell & Co., Ltd.; capital, 1,000l.; minimum subscription needed to float the company, 350 shares, payable 5s. on application, 5s. on allotment, and the balance of 10s. in two calls at six and twelve months. Not more than five shares will be allotted to any subscriber in each issue of 350 shares, and only 350 are to be issued at first. The provisional directors are W. D. Williams, S. Bangs, J. C. Pickford, E. H. Leete, and F. Cheshire—all retail chemists. The proposals of the prospectus are all in the direction of securing for the retail pharmacist who is a shareholder the profits on proprietary medicines which now go to foreign manufacturers.

P.A.T.A.—The Victorian branch of the Proprietary Articles Trade Association has already got into sympathetic touch with the Retail Grocers' Association, and a remarkable development has taken place. On March 7 one of the largest and most enthusiastic meetings in the grocery trade ever known in Melbourne was held. Mr. W. H. Elston, P.A.T.A. Secretary, and four representative suburban retail grocers had been canvassing all branches of the trade—wholesale, manufacturers, agents, and retailers—and at a very representative meeting some forty grocers qualified themselves as members of the P.A.T.A. by paying their annual subscriptions, and then passed a resolution

"that this meeting of grocers, wholesale and retail, manufacturers, and agents, deem it desirable to amalgamate with the Proprietary Articles Trade Association of Victoria," and "that, it having been resolved to amalgamate with the P.A.T.A. of Victoria and a sufficient number of those present having, by becoming members, rendered themselves eligible to nominate representatives, the following eight retail grocers be elected upon the Council of the P.A.T.A. of Victoria, subject to the necessary alteration in the constitution of that Association allowing for grocers' representation upon the Council."

Eight names were then submitted, all being those of well-known retail grocers representing Melbourne and its different suburbs. Representatives of wholesale grocers stated that the wholesalers would be ready to do their part, and the necessary representatives for the Council would undoubtedly be forthcoming. This movement is probably due in a very large measure to the efforts of the P.A.T.A. Secretary, who, before his election to that position, had been the representative of a journal appealing to storekeepers and grocers.

India and the East.

(News from our own Correspondents.)

ON THE ROAD.—Mr. F. W. Franks, of the Sanitas Co., Ltd., is touring through the Straits Settlements.

THE COST OF THE PHIPPS LABORATORY at Pusa will be 7½ lakhs. This sum includes the three lakhs given by Mr. Phipps.

WOLFRAM FROM PERAK.—The export of this mineral from the State of Perak during the year 1904 amounted to 333 piculs, on which a duty of \$1 per picul was collected.

THE CAPITAL of the firm of R. Scott Thomson & Co., Ltd., Calcutta, has been reduced, as from March 29, from Rs. 5,00,000, in 1,000 shares of Rs. 500 each, to Rs. 2,50,000, divided into 1,000 shares of Rs. 250 each.

HOMEWARD.—Mr. S. Hirst, representing Lever Bros., Ltd., and Mr. T. A. Mead, who looks after "Crown Perfumery" interests in India, were passengers on the mail boat that left Bombay on April 8 for England.

THE PRICE OF OPIUM.—From a recent official paper it appears that throughout the current official year 1904-5 the price of opium was unexpectedly high, the total increase in the revenue under this head producing Rs. 1,63,34,000.

THE MANUFACTURE OF ACETONE in India from locally-grown blue gum wood is being taken up by the military authorities. Acetone is the solvent used in the manufacture of cordite at the Government cordite-factory at Wellington, in Southern India, and has at present to be imported at a great cost. A large consignment of the Indian timber was sent home early last year for purposes of distillation, and the satisfactory results obtained show that the manufacture of acetone in India is a perfectly feasible project.

IMITATING PEARS.—In the Bombay High Court on April 1, before the Hon. Mr. Justice Batchelor, Mr. G. R. Lowndes, barrister, at the instance of Mr. Charles W. White, the agent in India for Messrs. A. & F. Pears, Ltd., applied for an interim injunction against Messrs. Bume & Reif, German merchants in Bombay, restraining them from importing and selling into India boxes of soap bearing labels in imitation of those used by Messrs. Pears. The Judge, on viewing the imitation labels, granted the application.

PACKING FOR THE STRAITS.—A good deal of trouble and annoyance, to say nothing of monetary loss, would be avoided if manufacturers and others would pay more attention to the packing of their articles that are affected by climatic conditions when sending to these parts. Even when advised to pack in a certain way manufacturers seem very loth to do so. Infants' food and articles of like nature should always be in sealed tins, and capsules, pills, and tablets in bottles with waxed corks and waxed outside. Court and porous plasters also give trouble and require special packing.

THE STRAITS POISONS ORDINANCE.—The memorial presented by the British chemists of Singapore against this measure was somewhat similar in tenor to that sent by the chemists of Penang (see *C. & D.*, April 15, p. 573). The Singapore signatories were Messrs. James McKenzie, Marshall K. Watt, Alexander M. Stewart, and George Whyte Crawford. They point out to the Straits Government that no representative of the interests of British chemists was invited to give evidence before the Select Committee that considered the question. The Committee's information was apparently derived exclusively from Chinese and Indian chemists. They welcome the proposed legislation to regulate the sale of poisons, but suggest that the British qualification should render an annual licence to practise unnecessary, that the British poisons schedule should be adopted, and that all wholesalers, and only retailers who are qualified, should be licensed. They think that nothing in the proposed Ordinance should apply to the dispensing by qualified chemists of poisons in prescriptions. The "*Straits Times*," commenting on the petition, states that the law was not passed for the purpose of unduly hampering the legitimate interests of the British chemists, and it would be well that the Legislative Council gives more than casual attention to the complaints embodied in such a temperately worded plaint.

South African News.

(From our own Correspondents.)

Note.—"The Chemist and Druggist" is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

South African Pharmaceutical Association.
Pharmaceutical Society of Cape Colony.
Natal Pharmaceutical Society.
Transvaal Pharmaceutical Society.
Rhodesia Pharmaceutical Society.
Northern District Chemists' Association.
Pharmaceutical Society of Orange River Colony.

Natal

IN FAVOUR OF THE STORES.—In the adjourned case of the Crown *v.* the Naval, Military, and Civil Service Supply Stores (see *C. & D.*, April 22, p. 605) the Chief Magistrate of Durban delivered judgment on March 31. His Worship said he had carefully studied the various aspects of the case on account of the importance of the establishment of a precedent, and he had looked up cases which had been decided in England, in the matter of the Pharmaceutical Society of Great Britain *v.* limited companies, and his decision was, that the case against the defendants be dismissed. The verdict has scarcely come as a surprise, writes our Durban correspondent, for it has been felt for some time that the Medical and Pharmacy Act is by no means a perfect piece of legislation. This was a test-case, and will be useful in future attempts to amend the law.

Transvaal

MR. ERNEST H. BRADFIELD has opened a pharmacy at Bethal, Transvaal.

TRANSVAAL PHARMACY REGULATIONS.

THE "Government Gazette" of March 31, 1905, contained a Government notice to the effect that the Lieutenant-Governor had approved regulations framed by the Transvaal Pharmacy Board for (1) the conduct of business of meetings; (2) the rules relating to examinations; and (3) the acceptance of certain certificates for registration without further examination.

Under the first heading the procedure as to the election of President is first dealt with; this is to be by ballot. The Board is to meet in Johannesburg at least once a month, and the Executive Committee, consisting of all the members of the Board, will meet as required by the President. The order of proceedings is laid down, as well as the duties of the President and Secretary.

Examination Rules.—These provide that examinations will be held in May and November, and application must be given by candidates at least a month ahead, the application being accompanied by

(a) A certificate of birth duly attested to the satisfaction of the Board;

(b) A certificate from a duly licensed chemist and druggist resident in the Colony stating that such applicant has been duly indentured, and has served as an apprentice to some chemist and druggist in the Colony or elsewhere for a period of not less than four years; or a certificate proving to the satisfaction of the Board that he has been practically engaged in the compounding and dispensing of medicines or medical prescriptions under a chemist and druggist in the Colony or elsewhere for the period of not less than four years immediately preceding the date of his application; and

(c) An examination-fee of 10*l.*

No candidate will be accepted unless he can show proof of education to the satisfaction of the Board.

This applies solely to those who desire to be registered before January 1, 1908, after which date no candidate will be admitted for examination who has not obtained a certificate showing that he has passed a standard in preliminary and general education as follows:

(a) Any Preliminary examination accepted as such by the Pharmaceutical Society of Great Britain; or

(b) Any examination of a legally constituted examining body approved by the Pharmacy Board, provided English, Latin, and arithmetic were included in the subjects of the examination for which the certificate was granted.

The qualifying examination may be both written and *viva voce*. The syllabus is printed in full, and is almost the same as that of the Minor examination of Great Britain. The points of difference are:

Botany.—The list of plants for recognition is not included.

Chemistry.—Heat and light are included. The practical examination is the same, but it is entitled "Practical Physics and Chemistry."

The other subjects are detailed as in the Minor syllabus, but

somewhat more attractively, adaptation to Colonial conditions being notable.

The General Rules provide for travelling-expenses and a guinea per diem subsistence-allowance being paid to members of the Board and the Secretary when attending examination and Board-meetings. The regulation respecting registration of persons holding external pharmaceutical qualifications is as follows:

The following certificates will be accepted by the Board as sufficient evidence of the competency of any person holding the same to practise as a chemist and druggist in this Colony without further examination:

Major certificate of the Pharmaceutical Society of Great Britain.

Minor certificate of the Pharmaceutical Society of Great Britain.

Pharmaceutical licence of Ireland.

The Board will, with or without further examination, as it may deem fit, be prepared to grant registration to applicants who hold diplomas or certificates granted by any college, society, or board of pharmacy, provided that further examination will not be required where it can be shown to the satisfaction of the Board that the curriculum and standard of examination required for such diplomas or certificates are not lower than those prescribed for the Board's examination in the Transvaal, and that such diplomas or certificates entitle the holders thereof to practise as chemists and druggists in the countries in which they were issued, and provided further that the Board may, before accepting any foreign or colonial diplomas or certificates, stipulate with the authority granting such diplomas or certificates that a condition of the acceptance thereof will be reciprocity in the matter of the acceptance of the certificate of the Transvaal Pharmacy Board, granted after the examination prescribed in the Board's syllabus.

Any person desiring to obtain registration will be required to submit, in support of his application, a sworn declaration, in the form attached to these regulations, made before a justice of the peace in this Colony, by himself and two persons acquainted with him.

It is provided that other certificates than the three specifically mentioned may be added to the list. A schedule to the rules is devoted to the form of declaration which has to be made in respect of registration under external certificates. This form contains the following declaration in respect to colonial and foreign applicants:

I declare that by the laws of ——— British subjects legally qualified to practise as chemists and druggists in Great Britain and Ireland are afforded privileges equivalent to those in respect of which the present application is made.

We observe that all applicants must be prepared to declare that they have never been convicted in any court on a charge of professional misconduct.

American Notes.

(From our Correspondent.)

ANTI-COCAINE.—In a previous note in this column it was reported that new anti-cocaine laws had been secured in the States of Missouri and Minnesota. A third Bill is now pending in the Legislature of New York State, and seems quite likely of success. All of these measures restrict the sale of cocaine to physicians' prescriptions, and declare that these prescriptions shall not be repeated unless at the express order of the physician in each case.

THE USE OF WOOD-ALCOHOL in galenical pharmacy has become so deservedly unpopular that several Bills aimed against its employment have appeared in the different State Legislatures. The early adjournment of Congress probably prevented the success of a national Bill. A measure before the New York Legislature provides for taxation of the substance in such manner as would presumably lessen its use. Another measure before the Minnesota Legislature is practically of the same import.

CONSOLIDATION SOUGHT.—The druggists of Chicago have again begun talking about consolidating the two local colleges of pharmacy: the Chicago College of Pharmacy, which is a part of the State University, and the North-Western School of Pharmacy, which is a part of the University of that name. Inasmuch as both schools are thus departments of large and successful universities, the movement is not likely to succeed; and, indeed, its supporters are apparently to be found entirely outside of both institutions.

THE NATIONAL ASSOCIATION OF RETAIL DRUGGISTS continues to secure judicial decisions in different courts and States affirming the validity of the direct-contract and serial-numbering method of distributing proprietary articles—the method which the N.A.R.D. has now succeeded in getting fifteen or twenty prominent manufacturers to adopt and employ. A Judge in Milwaukee, Wisconsin, has just taken the position that the plan is legal, and he has denied

an injunction which a certain cutter wanted granted against jobbers and manufacturers who had refused to sell him goods. This cutter's claim for damages was also decided adversely.

GREAT SURPRISE was occasioned recently by the announcement of the J. C. Ayer Co. that hereafter they would print the formulas of all their preparations on the label. Now the manufacturers of Pierce's Golden Medical Discovery and Pierce's Favourite Prescription have made the same announcement. It is quite evident that both manufacturers have been made to take this position by the attacks of Editor Bok of the "Ladies' Home Journal." Mr. Bok has repeatedly made assertions concerning the nature of the preparations of these two houses which are declared to be extremely inaccurate and unjust.

A PRESCOTT MEMORIAL.—The death of Dr. A. B. Prescott, Dean of the School of Pharmacy of the University of Michigan, continues to elicit regret in the pages of the American drug-trade journals and elsewhere. It is proposed to devote one session of the forthcoming meeting of the Michigan Pharmaceutical Association for the purpose of holding a memorial service, and to have prominent pharmacists read addresses on this occasion touching upon various aspects of the doctor's life and achievements. It seems likely also that the Council of the American Pharmaceutical Association will consider some means of honouring the doctor's memory by a permanent memorial.

WAR ON THE "PREPS."—The "Ladies' Home Journal" still continues its attacks monthly upon the patent-medicine manufacturers, and one result has been the introduction into several State Legislatures of Bills prohibiting the sale of proprietary articles containing more than certain prescribed percentages of alcohol, and forbidding entirely the sale of remedies containing any cocaine or morphine. In Vermont a Bill has already been made law providing that every patent medicine must bear its formula upon the label. Similar measures have been introduced in the Legislatures of other States, but have been so vigorously opposed by patent-medicine interests that they have been "killed."

MORE SUCCESS.—Two more radical court decisions have been obtained favouring the contract plan of distributing proprietary articles. One referred to the products of the Dr. Miles Medicine Co., as sold by a cutter in Pittsburg, Pa.; the other to the goods of the Phenyco-Caffeine Co., as sold by a cutter in Massachusetts. Neither cutter had signed the contracts of the proprietor, nor bound himself in any way to uphold contract-prices. And still in both cases the Judges granted injunctions preventing them from cutting prices and from securing their supplies by indirectness through other retailers who had signed the contracts, and who were therefore agents of the proprietors.

A DRUG-TRADE MINISTER.—The drug-trade of America is interested in the announcement that Mr. Truman H. Newberry, a large stockholder in the Corporation of Messrs. Parke, Davis & Co., and a member of the Board of Directors of that concern, has been appointed Assistant Secretary of the Treasury by President Roosevelt. It is rumoured that Mr. Newberry will be made head of the Treasury Department a little later on, when several Cabinet changes now in prospect have materialised. According to the "Bulletin of Pharmacy," Mr. Newberry has been appointed Assistant Secretary of the Navy. Mr. Newberry formed a close friendship with the President prior to the Spanish-American War, when Mr. Roosevelt was Assistant Secretary of the Navy, and Mr. Newberry was prominently identified with the Naval Militia from Michigan—the brigade with which he afterwards served during the war as a lieutenant on the *Yosemite*.



MR. T. H. NEWBERRY.

Colonial and Foreign News.

THE LOMBARDY ASSOCIATION OF PHARMACISTS has formally protested against the advertising of Italian State quinine on cigarette packets.

CELLULOID BY POST IN CANADA.—The Canadian Postmaster-General has decided that celluloid articles may in future be mailed only if packed in tin boxes with closely-fitting lids. Notice is therefore given that celluloid is regarded by the postal authorities as an explosive, and the mailing of such articles, except as prescribed, is prohibited, and renders the sender liable to prosecution.

GREEK ALCOHOL TRUST.—In a despatch from the Belgian Legation at Athens, reproduced in the "Bulletin Commercial" (Brussels) of April 1, it is stated that the principal distillery-proprietors of Greece have recently formed an alcohol trust, with headquarters at the Piræus. This trust has been formed in view of the lowering of prices caused by competition. Henceforth prices will be fixed by the trust, which will also endeavour to give an impetus to the export of Greek brandies.

IMITATION IN COSTA RICA.—A representative of the W. H. Comstock Co., Ltd., of Morristown, U.S.A., proprietors of Dr. Morse's Indian Root Pills was in Limon and San José last month on the track of local imitators. It is said that an article has been sold in Costa Rica for some months past in bottles similar to, and with labels like, those of the genuine Morse's Pills, which is a clever imitation. Plates were found for making outside and inside wrappers and for outside labels, their ownership being traced to a firm at Port Limon.

A STUDENTS' PROTEST.—Russia is not alone in the matter of strikes amongst pharmaceutical students. The "Bollettino Chimico-Farmaceutico" has a report from Genoa that many students attended the meeting on March 18 to discuss the subject of the "pharmaceutical analytical cabinets," when a telegram was read from the Minister of Education saying that he would gladly examine complaints. The students, holding the Minister's promise to be evasive, resolved to continue absenting themselves from the classes until they should get satisfaction.

THE ADVANCE OF WOMAN.—The Minister of Public Education has decided, on the request of the Director of the Pharmaceutical Institute of the Novozossisk University, to allow a lady dispenser to practise in the institute. The lady was examined in dispensing at the University in last May, and passed, but she was not admitted to practice—a thing necessary to entitle to a diploma. The present permit, the first in Russia, opens the doors of the University laboratories to women. The Minister of Public Education is considering the question of the institution of a women's pharmaceutical institute.

PROPRIETARY MEDICINES IN CUBA.—Several deaths having recently occurred in Cuba through overdoses of proprietary medicines, the Cuban Government revived an old Spanish law requiring that the formula of every nostrum should be printed on the label of the bottle in which it is sold; but American manufacturers protested, and the Government gave way to the extent of conceding that the formula of every proprietary medicine should be filed with the Cuban Government, who will keep it secret. If the formula shows that the remedy is dangerous, its sale will be suitably restricted.

PROFESSORS WANTED.—In the "Daily Malta Chronicle" of April 15, applications are invited for the appointments of Professor of Chemistry and of Lecturer on Materia Medica at the University at Valetta. The duties of the professor will be to give lectures daily in organic and inorganic chemistry, with practical lessons on each, during two years of the triennial course of Science in the Faculty of Literature and Science. The appointment is on the fixed establishment and the salary is 90% per annum, with an increment of 20% after ten years' service, and another 20% after twenty years' service. The lecturer is expected to give lectures daily in materia medica proper, pharmacy, pharmacology or therapeutics (general and special), with practical lessons on the same, in the second year of the academical course of Medicine and in the third year of the course of science. The salary is 66*l.* 13*s.* 4*d.* per annum.

CONSTITUENTS OF VIOLET LEAVES.

ACCORDING to a recent investigation conducted in the "Lancet" laboratory the fresh green leaves of the violet yield an abundance of a crystalline glucoside when suitably treated. They also yield a definitely crystalline body which behaves—chemically, at any rate—as an alkaloid. The pharmacology of the violet leaf is therefore interesting. The common violet (*Viola odorata*) belongs to the group of violaceæ, of which the *viola tricolor*, or pansy, and *ipeacuanha* are members also. The pansy contains an emetico-cathartic principle called violin. The fluid extract is said to produce a sense of confusion and dullness in the head, with headache; some dimness of vision, salivation, vesical tenesmus, with frequent and profuse micturition; turbid urine, offensive to the smell; and a sense of heat over the whole body, sweats, itching, and nettle-rash. It is interesting to note that it has been recommended as a specific remedy in crusta lactea or infantile eczema of the head and the face. The fluid extract is said to be successful in the second stage with serous or sero-purulent exudation and crusting. The medicinal virtue is said to reside in the leaves of the pansy plant, and it is the leaves of the violet which have been employed in cancer. We found that on extracting 100 grams of the fresh green leaves of the common violet with boiling water and after removal of extraneous substances (pectose, etc.) by means of acetate of lead and subsequent removal of the lead by sulphuretted hydrogen a yellowish coloured solution was obtained which on evaporation yielded a dark-coloured treacly mass. It was possible to decolourise the solution with animal charcoal, but on exposure to air the colour quickly returned. On placing the sticky mass *in vacuo* over concentrated sulphuric acid crystals were obtained—some were stellate and feathery, some silky, and others in needles. The yield was about 2 per cent. In this residue no evidence of the presence of an alkaloid was obtained. A solution of the mass was found to reduce alkaline copper solution, but the reduction was very much more marked after the solution had been boiled for a few minutes with dilute sulphuric acid. Further, a solution of the crystals yielded no osazone until after treatment similarly with acid. These results point to the presence of a glucoside, and the amount of glucose yielded on hydrolysis was as much as 33 per cent. of the total extract. Alcohol, however, was found to be a much more effective solvent, and accordingly 200 grams of the fresh green leaves were boiled with alcohol under a reflux condenser for several hours, the leaves were strained off, and the liquid was filtered and evaporated slowly to dryness. The residue was taken up with water, the liquid was filtered, and the filtrate was evaporated to dryness on the water bath. A similar treacly residue was obtained, which yielded an abundance of crystals when placed *in vacuo* over strong sulphuric acid. The crystals consisted of silky needles, some were star-shaped, and others were feathery masses. There was again no evidence of an alkaloid in these crystals, but on hydrolysis they yielded an abundance of glucose to the extent of about 33 per cent. The alcohol extracted furthermore a good deal of dark green oil similar in appearance to apiol or oil of parsley. This oil was shaken with acidulated water and the liquid was filtered. On evaporation a small residue of star-shaped and feathery crystals was obtained, which gave reactions common to alkaloids. In particular an abundant crystalline precipitate was obtained with iodine solution in potassium iodide and with Millon's reagent. A yellowish colour was given with strong sulphuric acid, a reddish-brown with nitric acid, and a greenish colouration with molybdic acid and sulphuric acid. It was then thought desirable to extract the spent leaves—i.e., after they had been extracted with alcohol—with chloroform, the whole mass being made alkaline and pasty by adding magnesia. A certain amount of green oil was thus extracted, which remained as a residue after evaporation of the chloroform. The residue was then made slightly acid with hydrochloric acid, and water was added. After heating separate quantities of the fluid were filtered and evaporated to dryness *in vacuo* over strong sulphuric acid. A small but distinct cluster of star-shaped crystals was obtained, which was decidedly bitter to the taste, and which gave very good general reactions for alkaloids. It would thus appear from this preliminary and, perhaps, somewhat cursory investigation, that the violet contains two distinct crystalline principles, a glucoside and an alkaloid, and, in addition, a dark green oil. The glucoside amounted in these experiments approximately to 2 per cent. of the leaves, the oil to 0.3 per cent., while it was not possible to say what quantity of alkaloid was present, as the amount yielded was so small. It is, however, interesting to record that the alkaloid from violet leaves behaved chemically much in the same way as emetine, the principal alkaloid of *ipeacuanha*.—"The Lancet," April 22.

Bristol Pharmaceutical Association.

THE annual dinner of this association was held at the Royal Hotel, College Green, on Wednesday evening, April 26, Mr. A. L. Taylor (President) in the chair. A representative gathering included: Mr. R. A. Robinson (President of the Pharmaceutical Society), Dr. Munro Smith, Dr. J. Lucas, Messrs. O. Isaac, J. G. Plumley, Moore (Bath), G. T. Turner, Gadd (Exeter), H. E. Boorne, Hopkins (Cardiff), O. C. M. Davis, Thomas (Cheltenham), Hagon, Mumford, and Bellamy (Cardiff), Hill, Plumley, jun., R. White, Manning, W. Horne, Ley Harte, Trebilco, G. Harris, J. Owens, and others.

Following the honouring of the loyal toasts the Chairman proposed "The Pharmaceutical Society of Great Britain," giving a hearty welcome to the President, and spoke of the present position of pharmacy in this country, contrasting it with pharmacy on the Continent, also referring to the Pharmacy Bill and the slight interest taken at present in the Pharmaceutical Council election.

THE PRESIDENT ON SIR M. HICKS-BEACH.

Mr. Robinson, in the course of his reply, referred to the benefits accruing to the craft from the work of local associations, then proceeded at some length to speak on the Pharmacy Bill, saying that he specially wanted to discuss it in Bristol because it was in that city, about twelve months ago, that a local deputation waited upon Sir Michael Hicks-Beach (the member for Bristol West) and interviewed him on the subject. When they asked Sir Michael to support the measure he was not sympathetic to them, to put it mildly. He (the speaker) was afraid the member for Bristol West threw cold water upon their efforts. He wanted to suggest that Sir Michael had not really had the time to carefully study the whole question. What is the principle of the Pharmacy Bill that had been introduced into Parliament? The Pharmacy Act of 1868, as they knew, enacted that every person who carries on the business of a chemist or pharmacist and deals in poisons, shall be qualified. It had come about that the law had been interpreted that the words "no person" do not include a limited liability company. Therefore the law, as it now stands, enables a limited liability company to carry on a business although not a single one of the company need himself be a qualified chemist. What is proposed in the Pharmacy Bill is to make that which applies to the individual apply to the company that carries on a pharmacist's business. He could not imagine anything revolutionary or foolish about that. They did not say that chemists' businesses should not be undertaken by limited companies; they admitted they themselves are a commercial body as well as partly professional. All they asked was that the people who carry on such businesses should be qualified to do so. As originally drawn, the measure enacted that all directors of a company should be qualified. It was pointed out that that would hardly be possible as some companies carry on a series of businesses and the Council of the Society subsequently came to the conclusion that they would be safeguarding the interests of pharmacy sufficiently if the measure enacted that at least one director must be a qualified man the same as an individual chemist. That is how the Bill is now drawn, and the change had met with great approval from a large number of persons, and several members of Parliament had expressed their readiness to support it. (Hear, hear.) In refusing to support the Bill Sir Michael Hicks-Beach gave rather a peculiar instance which had since become famous. He said he is a director of a railway company, but he could not act as engine-driver and thought it was quite enough if the Pharmacy Act provide that the assistant who handles the medicines is a qualified person. As to this he desired to point out that the illustration was not a fair one; but he would deal with it. When the Act was passed in 1868 Parliament, after the most exhaustive inquiry, came to the conclusion that the only way of safeguarding the sale of poisons was to make the owner of the business responsible. Why did Parliament, of which Sir Michael was then a member, come to that conclusion? One could easily see it was the owner who should be the qualified person. The owner was made responsible in every way. Of course let there be by all means be qualified assistants,

but let the onus rest upon the master. It seemed very strange thirty-six years after the passing of that Act, when individual chemists had qualified themselves at great expense, to repudiate the obligation made in 1868, so that a man need not care a brass farthing as long as his assistant was qualified. But he did not rest his case on that. He said it is far sounder to make the owner responsible. All they wanted was that the remedy should be applied to companies. He also thought Sir Michael's railway analogy a bad one, as there is only a money qualification for a director. If Sir Michael meant that a money qualification for a man to conduct the business of pharmacy is better than a brain qualification he (the speaker) took objection to the statement, and said that Sir Michael was wrong. (Applause.) He asserted that it is of greater safety to the public to have men with brains who have been examined and have qualified themselves. Then on Sir Michael's analogy another point suggested itself. The member for Bristol West said he is a director, but it is not necessary for him to be able to drive an engine. In reply to that the President pointed out that the man who drives the engine has someone to direct him. Further, railway directors have other persons than engine-drivers. They have civil engineers, and if Sir Michael took up that attitude he would not be allowed to call himself a civil engineer. That is what limited companies are doing as regards pharmacy. They themselves are unqualified; they are directors or shareholders, yet they assume the title of chemists. The public interest demands that the individual owner should be a qualified man and the person responsible. Sir Gilbert Parker had recently expressed himself in full sympathy with the measure, and a number of other prominent men had approved of the Bill in its present form. Concluding his speech the President said that the Government departments had recognised the part played by chemists for the welfare of the people, and would, he believed, do something in the matter.

Mr. E. W. Hill submitted the toast of "The Medical Profession," to which Dr. G. Munro Smith and Dr. J. Lucas responded. Mr. O. C. M. Davis proposed "The Bristol and District Pharmaceutical Association," Mr. Grant responding. The last toast, "The Visitors," was given by Mr. E. Young, and Messrs. Hagon, Mumford, Gadd, and Thomas replied. The speeches were interspersed with some capital songs.

THE OPTICIAN'S TITLE.

MR. F. G. PLAISTOWE, M.A., Queen's College, Cambridge, replying to a correspondent of the "British Optical Journal," gives the following notes as to the correct and at the same time euphonious titles for sight-testing opticians:

OPTOSCOPIST OR OPSISCOPIST.—This latter (opsiscopist) is philologically the best form, as it is regularly formed from Greek, *opsis* (*ὄψις*), sight, and *skopeo* (*σκοπέω*), consider, test. Compare stethoscopist (one skilled in testing the chest), and also auriscopist, electroscope. Optoscopist would mean the same as opsiscopist, but opto- is not a correct combining form, though used already for several recognised scientific words. . . .

OPTOLOGIST ought to mean "one skilled in the science of things seen" [*optos* (*ὀπτός*), "seen," "visible"]—i.e., a materialist. It is a word that would give a good handle to the Wimpole Street orthodox to mock the good men who adopted it innocently, not to say ignorantly, as meaning an "oculist optician." What's the good of sound without sense?

OPTIST is another (philologically) fake formation condemned in the Standard Dictionary.

OPSIOLOGIST [*opsis* (*ὄψις*), sight, and *λόγος* (*logos*), science], is correct, and means one skilled in the science of the eye or sight; compare physiologist [*physis* (*φύσις*), nature, and *λόγος* (*logos*), science]. That sounds all right, but is it of a wider scope than required for a sight-testing optician?

OPTICIST is already in use, I think. It is a good form like physicist, and means one skilled in optical science.

Then there are formations from Greek *ophthalmos* (*ὀφθαλμός*), eye.

OPHTHALMIST and **OPHTHALMOLOGIST**=oculist in meaning. Both of these are in use.

OPHTHALMICIAN=optician in meaning. It is not in use, but is a good form.

OPHTHALMOSCOPIST.—In use, see dictionaries.

OPHTHALMICIAN seems to me to be a good word because (i.) it is new; (ii.) it is euphonious, (iii.) it is comprehensive, (iv.) it is not too long, (v.) it suggests at once an optician who attends the eye.

Winter Session.

Association Ballads.

THE PURPOSE.

*The men, their aims, their daily irk;
Their troubles, trials, thoughts, and views
On things politic, foes that lurk
In friendly guise, but treach'rous work—
These be the burden of our Muse.*

LXVI. STOCKPORT.

WHILE the public go wild o'er political fads
And the doings of Togo and "Roj,"
The chemists of Stockport (no Cheshire man gads)
At the Albert Hall clamour for Dodge,
And, closing up quick
At the summons of Hick,
Their griefs with each other they lodge.
They live in a smoky, irregular place
At the junction of Goyte and of Tame;
But their thinking is done at a regular pace,
And they scorn an ephemeral fame,
Preferring, for choice,
The calm judgment of Royse
To the brilliance of—some we might name.
We have heard since our youth of the Linseed of Kay,
And of close-sticking Coaguline;
Of "Vampires," and "Klins," and the coherent sway
Of a tenacious Tenastine.
And if Orrell or Gee
Writes to local M.P.,
His interest is suddenly keen.
So frugally Arnfield nurses the cash
That they're ever financially sound,
And nothing they do e'er approaches the rash;
For in local trade topics they've found
Plenty food for discourse—
And they might do much worse,
For "discoursing" doth greatly abound.

Harrogate Pharmaceutical Association.

A MEETING of this Association was held at the Salisbury Hotel, Harrogate, on April 14, Mr. George Weston (President) in the chair. Among others present were Messrs. Atkinson, Wood, Davis, Eynon, Dawson, Handford, Halliday, Pattinson, Leak, Mitchell, and Lawrence. Mr. Eynon had got together a very interesting exhibition of scientific and pharmaceutical apparatus and novelties, the special features of which he explained. A very hearty vote of thanks was accorded to Messrs. S. Maw, Son & Sons, Messrs. Parke, Davis & Co., Messrs. Allen & Hanburys, Ltd., Mr. Elias, and others who had sent apparatus, etc., for exhibition.

Public Dispensers' Association.

A MEETING of this Association was held at St. Bride Institute, Ludgate Circus, E.C., on April 26, Mr. R. Welford, Chairman of Council, presiding. There was a fair attendance to hear Dr. Harrison Martindale lecture on "Notes on Recent Bacteriology." The lecture, an abstract of which is printed on p. 671, was followed with interest. Afterwards a few questions regarding various points in the lecture were asked by Mr. W. E. Miller, Mr. F. Noad Clark, and others. A member gave his experiences of malarial fever in Borneo, and a general inspection of the many interesting lantern slides, mounts, and cultures exhibited by Dr. Martindale took place. Dr. Martindale was accorded a hearty vote of thanks.

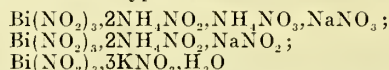
Chemical Society.

A MEETING was held at Burlington House, W., on Wednesday, April 19, the President (Professor Meldola, F.R.S.) in the chair. There was a very small attendance, and the list of papers was unusually short. The first paper was on

THE COMPOSITION OF COMPLEX BISMUTH NITRITES.

In it Mr. T. C. Wall dealt with the composition of the precipitates obtained by pouring liquids containing bismuth nitrate and various alkaline nitrites into saturated solutions

of other nitrites, or in some cases into organic solvents. In this way salts of such types as



were obtained. All these substances are very unstable, but some of them crystallise well, and are of constant composition however prepared. So that there can be no doubt, the author believes, of their being really definite compounds. The next two contributions, dealing with the

SYNTHESIS OF TERPENES,

were read by Professor Crossley, in the absence of the joint authors, Dr. W. H. Perkin, jun., and Mr. S. S. Pickles. It will be remembered that Dr. Perkin has already effected a synthesis of terpineol and dipentene, using a hydrosyphenahydrotoluic acid as a starting-point. In the present series of experiments, by the application of the Grignard reaction to similar partially reduced toluic acids, three new alcohols and their corresponding terpenes have been prepared. A comparison of the properties of these bodies with those of known terpenes shows that the lemon odour characteristic of limonene and its isomeride dipentene is associated with the presence of a double bond both in the ring and in the iso-propyl side-chain, and that the relative positions of these two double bonds may be changed without affecting the odour materially, but that the disappearance of the double bond from the ring is associated with the appearance of a peppermint-like odour in the product.

Sheffield Pharmaceutical and Chemical Society.

A MEETING was held at the Montgomery Hall on Wednesday evening, April 26, Mr. A. Russell Fox, F.L.S. (President) in the chair. There were also present Messrs. H. Antcliff, G. T. W. Newsholme, J. Austen, P. Carr, C. S. Richards, J. Evans, F.I.C., F.C.S., J. Preston, J. G. Jackson, G. Ellinor, H. G. Williams (Hon. Sec.), R. D. Douglas, A. H. Culverhouse, J. S. Oswald, and others.

The Hon. Secretary reported with reference to the Society of Chemist Opticians deferred from the last meeting, and read the list of the objects of the Society, showing that they had nothing to do with examinations. The matter was again deferred *sine die*.

Mr. C. H. Twelves and Mr. Frederick B. Hirst, Ph.C., were elected members of the Society.

The principal business of the evening was an address by Mr. G. T. W. Newsholme on

CURRENT PHARMACEUTICAL TOPICS.

In this he dealt with the Council Election, expressing satisfaction that so many well-known and capable men have come forward to contest the election with the seven retiring councillors. He warned the electorate against the merely clever candidate, for what is wanted on the Council is earnestness rather than brilliancy, and sound every-day commonsense rather than glib oratory. With regard to Parliamentary matters, Mr. Newsholme said:

The manifesto of Mr. Jesse Boot (who appears to be getting rather hysterical as the Society's plan of campaign becomes more active) sufficiently exhibits the fact that our opponents are determined not to be reasonable, or even accurate in their facts. The result ought to be a great strengthening of our cause. It is apparent that whatever representations we might have listened to on behalf of opponents, the opposition would have been just as strong. Concession is not of value when absolute immunity from statutory control is in question, and we must now brace ourselves up to uncompromising warfare with the public's enemy and our own. At the present moment six members of Parliament have blocked the Bill, and it would be very little removed from the truth if it were said that the majority of them have no real objection to the measure. In two instances the reasons for opposition are purely personal, and would make very instructive "copy" for a periodical interested in legislative reform. These blocks do nothing more than prevent the Bill coming on after twelve o'clock, and that is the only chance our opponents have got, for if the matter came on for discussion in the House there is, fortunately, a large majority of disinterested members who are not so entirely wrapped up in the idea of the sacredness of limited companies as to yield up to them immunity from restrictions imposed in the general interest. No one knows this

better than Mr. Batty Langley or Mr. Alexander Cross, but the disguise is now thrown off, and we know that the one thing the opposition fears is discussion in the House. Our duty is plain; it is to force on the time for discussion, and if we are not successful this Session, try again next; but, at any rate, to keep on trying—remedying faults of tactics, consolidating and instructing. Along that line alone lies ultimate success.

Mr. Newsholme referred to Boots' advertisement in the daily papers, which he characterised as the finest advertisement the Pharmaceutical Society could have, and thought that the argument used that it would cost them a large amount of money to remove their signs was most childish. He then referred to the proposed additions to the Schedule of Poisons, and lastly to division of the Minor examination, saying they must all admit that at the present time to compress the Minor examination into the short space of time is very trying to the candidate, who does not perhaps do himself justice as he might if he had longer time for training. But he is not in favour of dividing the Minor under present conditions. He thought the candidate should show some evidence of training. He thought the most practical suggestion on this matter was made by Mr. Rymer Young in his paper read at Manchester in February.

DISCUSSION.

The President said that the points raised by Mr. Newsholme, especially with reference to the division of the Minor, touched him so closely that he would not speak on them. But he would say that if there was to be an alteration in the examination there should also be an alteration in the examiners. They should have men of business capabilities. It was not fair that men should go up and be examined by men who are merely medical officers of cities and dispensers of certain hospitals. They wanted men who knew something of the business of pharmacy. He did not agree with Mr. Newsholme's view of Boots' advertisement. The lie as to the enormous profits which Mr. Boot had been able to abolish would be read by thousands to every one who had the chance of hearing the other side as put forward so ably by Mr. Newsholme.

Mr. J. Preston expressed himself in hearty accord with the suggested division of the Minor, which he himself had advocated many years ago. The number of failures is alarming. "Make the examination as stiff as you like," he said, but give the candidates as long a time as possible. With reference to the additions to the Schedule, he thought chemists had chains enough to bind them at present without going to Parliament to forge new fetters for them. They were drifting to the time when tea and potatoes would be placed on the Schedule as containing poison.

Mr. Ellinor expressed himself in agreement with Mr. Newsholme on many points. He asked if the Pharmaceutical Council were carrying out the charter of the Society? He contended that they had themselves to blame largely for the present state of things with regard to the drug companies, and proceeded to deal with the historical side of this question. He thought the Minor should be divided, and that they should have an examination in Yorkshire.

Mr. Austen did not agree with Mr. Preston's remarks with reference to the disadvantage of placing additional articles on the Schedule. He looked forward to the time when all dangerous and powerful drugs would be placed on the Schedule—it would be better for the chemists and better for the public. He was curious to know what the firms who put up acetanilide in headache-powders are going to do, as it was through them that it had been discovered it is a poison. He urged the importance of choosing the right men to represent them on the Council.

Mr. Newsholme replied and dealt with the several points raised in the discussion, and was accorded a hearty vote of thanks.

Glasgow and West of Scotland Pharmaceutical Association.

At the closing meeting of the session of this Association, held at 94 West Regent Street, Glasgow, on April 20, Mr. J. W. Sutherland (who presided in the absence of the President, Mr. Currie) opened an interesting conference on

HOW TO IMPROVE AND MORALISE THE PRACTICE OF PHARMACY.

He said there is a general opinion that one of the first conditions necessary to improve the position of pharmacy is

better or shorter hours. During the early part of the winter the Association had this matter under discussion and appointed a committee to visit the chemists in the different districts throughout Glasgow with the view of bringing them into line with other shopkeepers on the question of early closing. He regretted to say that up till now nothing had been done in this particular subject, but he had hopes that something would soon be done. The Association is also endeavouring to make things better in regard to prices, and it is proposed at an early date to submit a list of prices for specialities and proprietary articles which it is hoped the trade will agree to and adhere to. Mr. Sutherland also referred to bad trade and thought some of it was due to the improved sanitary condition of the city. He also mentioned the recent visit to Glasgow of the President of the Pharmaceutical Society, and a scheme which the Secretary (Mr. Gilmour) is getting up for social enjoyment. Alluding to the question of morality in the trade, Mr. Sutherland remarked that chemists have nowadays to contend with a growing demand on the part of the public for narcotics. Whether that is due to pressure of business or to the fact that the druggist does not now take the same care of the public that he used to do, or is due to the public becoming more aware of the nature and the use of narcotics and of stimulants of one kind or another, he did not know. But there is no doubt that a great responsibility rests upon chemists, and it behoves them to be exceedingly careful not to encourage the sale of narcotics. The sale of cocaine, morphine, and various other narcotics is on the increase, as those of them who could go back twenty or thirty years are well aware. To-day they are told of customers who come to their places saying they got such-and-such stuff in solution or in tabloid form from So-and-so, and that they got it without any question being asked or signature being obtained. That he considered a very serious matter, and one which they should carefully watch and avoid. If medical men are anxious to cultivate better relations, and chemists are similarly inclined, they would hear less about complaints of counter-prescribing and far less of the difficulty of making a living in the medical profession. Touching upon pharmacy law, he stated that it is to be regretted that the Pharmacy Bill has been complicated by a number of representative M.P.s, for what purpose he was not prepared to say. The fact remains that pharmacists are not sufficiently united to force upon Parliament and the country their just demands. During the past week a very large addition has been made to the Poisons Schedule, and chemists should go further, and ask that all prescriptions should be in the hands of qualified men. Indeed, they should even go further still, and get the Pharmaceutical Society to prepare a tariff of rates, so that anyone going below a certain tariff would have a particular reason for doing so.

Mr. Brodie said the nature of the chemist's business has altogether changed in the last twenty or thirty years. At one time, when there were not so many patent medicines in use, they did not sell so many as they do now, but the profit they had then was worth taking, whereas these medicines are not worth selling now. Regarding narcotics, he remarked that they could scarcely get anyone now to take a nauseous medicine. He added that he had never in all his experience seen such a state of collapse in the drug-trade in Glasgow as they have had for the last two years.

Answering a question by the Chairman as to the sale of narcotics, Mr. Brodie said he did not sell anything like the quantity he did in former days. In the matter of opium, for instance, he used to buy 14 lbs. at a time; now a pound would last two or three years.

The Chairman, commenting on Mr. Brodie's experience, said he knew that 50 oz. of cocaine is used in two or three months in an ordinary dispensing-business.

Mr. Moir said he believed that when shorter hours come into general operation throughout the city, like other shopkeepers, the druggists will naturally follow, and the problem will be solved of its own accord. He did not think chemists are keeping open any longer than is necessary. He was one of the committee appointed for the South-side of the city in connection with the early-closing movement in the trade, and they had really done nothing, the reason being that the corporation have postponed the adoption of the Early-closing Act till the autumn. If it is carried then, they

would endeavour to get it brought into force by the druggists too. In his experience there were more narcotics being used a number of years ago than now. The sale of phenacetin and antipyrin has gone up by leaps and bounds, but there has been no increase in the sale of opium and chloral.

Mr. Lothian confirmed the reports that there is exceptional stagnation in trade at present. There are indications, he observed, of a reaction against put-up remedies.

Mr. Tocher said the tendency nowadays for people living in the suburbs is to come into the city with prescriptions. He had the authority of some medical men for that statement.

Mr. Moir, supporting Mr. Tocher, said this is due in a measure to the prosecutions of medical men by the Pharmaceutical Society.

Mr. Brodie said he had a conversation with a medical man a fortnight ago. The medical man stated that he was one of the fighting men and referred to the persecution on the part of the Pharmaceutical Society. He (Mr. Brodie) considered it perfectly ridiculous to prosecute a doctor's unqualified assistant for selling precipitate ointment or Rankin's ointment. The doctor in question said he had made up his mind that for every medical man's assistant who was so prosecuted he would endeavour to find out three chemists' assistants and get them prosecuted.

Mr. Moir said that in Crosshill (one of the South-side suburban districts) there are a large number of medical men resident who have surgeries in working-class districts where prosecutions took place. Since those prosecutions took place they will not send prescriptions to chemists in the South-side suburbs if they can possibly help it.

Mr. Tocher: It is a boycott by the doctors of all chemists on the South-side.

Mr. Moir said these prosecutions have been instigated through mere jealousy, maliciousness, or some other thing of that sort, and that ought not to be encouraged. The offenders ought, in the first instance, to get a warning, perhaps a second warning, and if the Society then require to prosecute they could come before the public with a just case.

Mr. Gilmour questioned whether the average chemist in Glasgow made as good an income as he did twenty or thirty years ago. The number of chemists in Glasgow who, within his own recollection, have died rich, could be counted on the fingers of one hand. But, taking everything into account, the chemists of to-day are not so badly off as they sometimes think they are. As to the Chairman's impression that the use of narcotics has increased, although particular narcotics have changed, that is a very difficult matter to decide. There can be no doubt that the chemist of to-day has to be much more careful than his predecessors. As to the Society's prosecutions, that is a delicate matter, but unquestionably the prosecutions referred to have done chemists no good in the South-side, and have caused a good deal of bad blood. He did not despair of the future of the drug-trade. He thought that in Glasgow, as elsewhere, the personality of the pharmacist would still count. Personality is the most important asset in the goodwill of the business.

The Chairman said he regretted to hear the Pharmaceutical Society blamed for the prosecutions. He could assure them that the Society has never yet acted in a single prosecution without direct information placed before them from which they could not get away. The direct information in many cases came from sources that would astonish those present.

This closed the discussion, and

Mr. Gilmour (the Secretary) afterwards submitted to the meeting several candidates' addresses in connection with the election to the Pharmaceutical Council, and also reported as to the progress of the arrangements for the forthcoming joint excursion of Glasgow and Edinburgh chemists.

MR. C. J. TAYLOR, pharmaceutical chemist, of Cheriton Street, 36 Black Bull Road, and 101 Dover Road, Folkestone, has been re-elected a member of the Cheriton Urban District Council.

DR. A. L. NAIR, managing proprietor of Messrs. N. Powell & Co., druggists, etc., Byculla, Bombay, sails by the *Caledonia* on April 29 on a visit to Europe. He expects to be in England early in June.

Personalities.

MR. HENRY PEET, J.P., chemist and druggist, Liverpool, is spending a short holiday in France.

MR. J. C. ARNFIELD, pharmaceutical chemist, of 7 Lower Hillgate, Stockport, has been elected Vice-President of Stockport Tradesmen's Association.

MR. A. E. ROWCROFT, chemist and druggist, 66 Week Street, Maidstone, has been elected a trustee of the poor. The election takes place on Easter Monday under an Act of Parliament of George III. and creates much local interest.

THE HON. GEORGE T. FULFORD, of the Dr. Williams' Medicine Co., is now in London and, as a member of the Canadian Senate, has written a long letter to the "Daily Chronicle," April 26, denying that there is a sectarian crisis in Canada.

MR. J. S. BATTLE, pharmaceutical chemist, attended the ceremony of swearing in at the Lincoln City Sessions House on April 20. Mr. Battle has been working hard in support of Mr. C. H. Seely, M.P., whose return to Parliament is being opposed by the Tariff Reform party.

MR. G. VICTOR WRIGHT, chemist and druggist, Abbey Hill, Edinburgh, a member of the famous Canongate Kilwinning Lodge of Freemasons (Robert Burns was its Poet-Laureate), on Wednesday attended the Grand Festival of English Freemasons in London as a member of a specially invited deputation.

DR. EDWARD DIVERS, M.D., F.R.S., Emeritus Professor of Chemistry in the University of Tokio, and Deputy-President of the Society of Chemical Industry, has been nominated as President for 1905-6, to succeed Dr. W. H. Nicholas, New York, in July, subject to election at the general meeting.

MR. NATHANIEL NICOLAI, a polyglottist in the literal sense, has been in London during the past ten days *en route* for South America. He attended a function at the Columbia Lodge of Freemasons last week and delivered an eloquent speech in response to the toast of the visitors. Later in the week he was entertained to dinner at the Criterion Restaurant by his colleagues on the London staff of Messrs. Parke, Davis & Co.

ALDERMAN JOHN BROOKS, chemist and druggist, The Broadway, East Ham, is chairman of the local Education Committee, which has declined to administer the Education Act in the district. An interviewer caught Mr. Brooks behind his counter "dispensing pills and powders in apparent unconcern at the extraordinary crisis," and he assured the interviewer that all the councillors are prepared to face the consequences of their acts in this matter. Mr. Ernest Gray, M.P., who represents West Ham (North), is in complete sympathy with the Council.

MR. WILLIAM WISE, chemist and druggist, Launceston, Cornwall, was elected a fellow of the Linnean Society at a recent meeting, his nominators stating that "he has long been a critical worker on the plants of East Cornwall." Mr. Wise is well known locally as a zealous field botanist, and has rendered considerable assistance by recording habitats, etc., to the "Flora of Cornwall" which is now being written by Mr. F. Devey, of Ponsanooth. Mr. Wise names regularly the display of wild flowers in the public library, and he has deposited his representative collection of Devon and Cornwall plants in the Launceston Museum, of which he is Hon. Curator.

MR. G. CLARIDGE DRUCE, M.A., Oxford, has completed his appreciation of the life and work of George Don, the Forfar botanist, and it has been published in the "Botanical Garden Notes," edited by Professor I. Bayley Balfour, Edinburgh. This seems to be the appreciation erroneously referred to at the beginning of the month as the work of Professor Balfour, who certainly contributes certain notes to it, but Mr. Druce's work extends to 240 pages and comprises a memoir of Don, a list of his chief works, and seven appendices, including a critique of Don's discoveries, his herbaria, and letters. Botanically Mr. Druce's memoir is of great value, and Forfarshire men especially are grateful to him for the labour and love which he has given towards replacing a Forfarian into full recognition of his services to natural history.

Observations and Reflections.

By XRAYSER.

The Members of Parliament

who were "astonished" when Mr. Boot expounded the Pharmacy Bill to them had some reason to be. Probably they fancied themselves as capable of understanding it as their enlightener. What they know, and what Mr. Boot also knows very well, is that the purpose of the Bill is to require that companies who carry on the practice of pharmacy shall be subject as far as practicable to the same legal conditions as those which affect individuals. They are not now, and Mr. Boot aims to perpetuate the present inequalities. His letter strangely recalls the soliloquies of another famous J. B., as recorded in "Dombey and Son":

Would you, ma'am, would you? Not while J. B. can put a spoke in your wheel, ma'am. J. B.'s even with you now, ma'am. He isn't altogether bowled out yet, sir, isn't B. She's deep, sir, deep, but Josh is deeper. Wide awake is old Joe; broad awake and staring, sir.

Would you give J. B. the go-by, ma'am? Not yet, ma'am, not yet. Damme not yet, sir. Joe is awake, ma'am. Bagstock is alive, sir. J. B. knows a move or two, ma'am. Josh has his weather eye open, sir. You'll find him tough, ma'am. Tough, sir, tough is Joseph. Tough and de-vil-ish sly.

It may be freely admitted that there is no analogy between Dickens's rough and tough old Major and the J. B. of company fame beyond their initials. And yet there is a responsive echo in their published sentiments.

The Dispensing Exemption

turns up in one of the Leggett cases at Leeds, and will probably add an interesting complication to the Pharmacy Act problem which is being devised for the High Court. It is not my purpose to assist the two Yorkshire Stipendiaries in this or any other of their difficulties, though I could easily do so, and though both of the learned gentlemen appear to be angling for guidance. It may be presumed that when the Leeds Magistrate postponed judgment until May 2 he was hoping to get some enlightenment from the Bradford Court before that date. But Bradford countered this anticipation by fixing May 12 for the decision there. It is a pity that both Benches did not adopt the same date and give independent judgments. Then there would have been the possibility of diametrically contrary interpretations of the Act in some points, and these would have whetted the interest of the High Court to the extent of ensuring a pretty close investigation of the recognised ambiguities of the statute. But to return to

The Word "Dispensing,"

for it is only with the word and its history that I am concerned just now. Why has this word taken such root in English, particularly in connection with prescriptions? In French "preparer les ordonnances" is the almost invariable expression, though "executer" and "remplir" are used occasionally. The last quoted term seems to correspond with the American "fill." In German "dispensiren" is not unknown, but "nach vorschritt bereiten," or "ausgeben" (prepare or give out), is very much more common. The dispenser in a German hospital is an "Austeiler," an almost exact equivalent of "dispenser." That the "dispensing" of medicines has been long known in English is proved by a curious quotation given in the New English Dictionary, and dated 1533. It is extracted from "Elyot Cast. Helthe," and runs as follows: "Some (physitions) were not diligent inough in beholdynge their drouges or ingredience at all tymes dispensid and tried." Still, it

seems that the apothecaries for some centuries "compounded" the prescriptions or "bills" of their masters, the physicians, and that term is still the one more usually employed in Ireland to this day. So far as I can trace, the word "dispensing" was popularised in England by

The Dispensaries

which the College of Physicians established for the sick poor about the end of the seventeenth century in the course of their quarrel with the apothecaries. For these institutions "the physicians," says Dr. Johnson in his life of Garth ("Lives of the Poets," published about 1780), "procured some apothecaries to undertake the dispensation." "Dispense" is a very old English word. It came into use (says Murray) from the mediæval Latin "dispensare" about 1200 or earlier, and first appears in the sense of the administrative work of a steward in connection with the application of laws and rules to particular cases, particularly in the way of relaxing punishment. So the primary sense was that now associated with our expression "dispense with," but the preposition was introduced later. In old English (says Johnson) a pens-um was a portion of wool which had been weighed out and which the housekeeper distributed to each maid for her day's task. "Pensa" was another old word applied similarly to weighed-out portions of food. From these came the word "dispensary," referring to the steward's room, and sometimes to the larder.

The Idea of Weighing

is of course etymologically inherent in the word "dispense," as well as in such words as "recompense," "compensate," "expense," and "spend." In "suspense" the derivative sense is that of hanging, but the Latin words "pendere," to hang, and "pendere," to weigh, were closely related. To weigh and to dispense are appropriately connected, but it cannot be said that the original meaning of the word had any influence in bringing it into use in connection with the compounding of medicines. It is possible, however, that the word "dispensatory," meaning a book of formulas, was formed direct from the basis of things weighed.

The Exact Legal Value

to be attached to dispensing has yet to be determined. In the Pharmacy Act, and also in the Apothecaries Act of 1815, dispensing is properly distinguished from compounding on the one hand and from selling on the other. Clearly you can compound a medicine and not dispense it, and you may dispense a medicine and not sell it. So, too, you may sell medicines without dispensing them. In the Sydenham Society's Lexicon dispensation is defined as "the process of making up medicines in accordance with prescription and the delivering of these to the patient." But is a prescription of any kind essential? In the Committee discussion on the dispensing exemption in the House of Commons in 1868, Mr. Lowe insisted very urgently on the importance of adding "under the written prescription of a duly qualified medical practitioner." Without such words, he contended, any chemist could stultify the Act by "dispensing" poisons in compounds whenever he chose. But the Committee, by 16 to 4, deliberately rejected Mr. Lowe's proposed amendment. In the Shepperley case, before Baron Pollock, Sir Henry James, for the defendant, tried hard to induce the Court to agree that the word "dispensing" in the twenty-eighth section of the Apothecaries Act covered a discretion in the selection of medicines for customers, but the Judge would not adopt that view. These instances are mentioned to show how difficult it has been to legally define dispensing.

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Editorial Comments.

An Easter Offer.

METROPOLITAN daily papers have got a lot of business from
Boots Cash Chemists, Ltd., during the past week. The
modern Mrs. Partington advertisement which we referred
to a month ago has been brought up to date, the same cartoon
being used, and it has appeared in at least half-a-dozen
London papers. If anything, the attack on the Pharmacy
Bill is somewhat more effective on this occasion, Mr. Peet
having considerable assistance from the following excerpt
from an editorial statement by our Bloomsbury contem-
porary:

In view of the difficulty which appears to be experienced
by some chemists and druggists in explaining the intention
of the promoters of the Pharmacy Bill, particularly when
approaching members of Parliament on the subject . . . we
cannot too earnestly impress upon readers the desirability
of refraining from advancing any arguments which may

lend colour to the supposition that the Bill is promoted with any object other than that of ensuring the public safety. The peculiar thing about this excerpt is what it does not contain. In the original we observe after the word "subject" the following sentence :

The attention of readers is directed to the following statement of the objects of the measure,

which referred to six paragraphs taken, we understand, from a circular describing the objects of the Bill prepared and circulated by the Secretary of the Society to members of Parliament. Then came a paragraph from which the "public safety" piece of advice is extracted. Our contemporary finished with the observation—

by providing effective control over all shops where medicines are dispensed or poisons retailed.

The excerpt is probably a legitimate deduction from a statement which had been better left unsaid, but it is not commendable either in argument or advertisement to leave out essential material.

As a companion to the page about the Pharmacy Bill the company have another full-page advertisement headed :

£1,000,000

(One Million Pounds)

per year is the estimate given by "The Times" newspaper (27th Dec., 1904), after an independent investigation, as the amount SAVED by the public through purchasing their drugs and chemicals and having their medicines dispensed at Boots Cash Chemists.

When we read that statement in the "Times" it was in an advertisement of Boots'. This week's advertisements contain an "extract from 'The Times'" which is taken from that very advertisement. Are we to assume that this was published with all the authority of Printing House Square, and that it was not revised in Station Street, Nottingham, before publication? If not, it is remarkable that the "Times" has done for Mr. Boot what it refused to the Czar of all the Russias. But that million needs a lot of salt!

In his letter last week Mr. Boot said :

We intend to give largely increased attention to the drug-trade, and it will be for the trade to see in the future whether it has paid them to grasp at the shadow of an increased sale of proprietary goods and lose the substance of the drug-trade.

This is getting to business, and we have a specimen of what he means in the million pounds advertisement. Engravings are given of five lines as follows :

Cascara Sagrada Tablets, 2 grs., in bottles of 100 for 8½d.

Cascara Capsules (=Ext. fl. 3ss.), in boxes of 36 for 10d.

Citrate of Iron and Quinine, 9d. per oz. bottle.

Ammoniated Quinine Capsules (=tr. 3j.) in boxes of 24 at 10d.

Blaud's Pills, gelatin coated, in bottles of one gross, 10d.

Pearl coated, 4d. per gross. Capsules, 10d. for a box of 48.

All these articles, except pearl-coated Blaud's pills, are sent post free at the same prices as they can be got at the shops. The only way to deal with competition of this kind by those who feel it is to meet it completely, promptly, and at once. The alternative is to ignore it, which many, fortunately, are in the position of doing; past experience in the proprietary medicine line shows that mere nibbling at cut prices is ineffective and unremunerative, and if Mr. Boot's future policy is to publish bold advertisements of popular domestic medicines at cut rates, they may be made to help general sales if others in the same line of business are prepared to meet the demand.

Progress in Egypt.

LORD CROMER's annual report on Egypt and the Soudan is always an interesting document, and that for the year 1904, which has just been issued, is exceedingly so from a

public point of view. True, there is no reference to the condition of pharmacy in Egypt, but up-to-date information on this point has been published in our recent issues. The report is not a bald statement of facts, as are so many Blue Books of this nature, but there is much of educational interest in it which is naturally due to the fact that a new era commenced in Egypt with the fall of the Mahdi. It may also be said that the Anglo-French agreement of April 1904 marked a further epoch in the British administration of Egypt by "legalising" our position from a political point of view and releasing us from our previous "irregular" position, as it were. This important event is fully set out in the report, and its successful conclusion is unmistakably due to Lord Cromer. It must always be remembered that France had large material interests in Egypt before our occupation, and that is why French pharmacists have secured a hold in pharmacy. There are many miscellaneous matters of general interest in the report, not the least remarkable of which are the trade statistics. The total value of imports last year was 19,889,000l. E., or 3,742,000l. E. more than in 1903, and the exports were 20,316,000l. E., or 1,200,000l. E. more than in 1903. These prosperous conditions were due to the good cotton crop, the feeling of renewed security by the conclusion of the Anglo-French agreement, and the gradual development of Soudan trade. Incidentally, the "cash on delivery" system in Egypt, which has been in operation for nineteen years, has been a remarkable success, and Lord Cromer states that British trade has suffered by the absence of any arrangement between Great Britain and Egypt. Lord Stanley is to remedy this. Of the imports stated above the United Kingdom and Colonies provided over 8,000,000l. E., Turkey being second with about 2,500,000l. E., and France third with 1,900,000l. E. of the exports eleven millions went to the United Kingdom and Colonies, the remainder being divided among France, Germany, and Russia. There is no mention whatever of the imports of drugs and chemicals. The campaign against the consumption of hashish still continues, but, except in so far as its result is to raise the price of the drug (which is now 50f. per kilo.) it cannot be said to be very successful. Indeed, there is a considerable demand for the drug, which is all smuggled into the country from Greece by way of Tripoli. No sooner is one route closed to the smuggler than another is opened up, and the extent of the trade is indicated by the fact that the Customs seized 21,369 kilos. of the drug last year. The administration, trade, and present condition of the Soudan are dealt with in a separate report, which runs to forty-two foolscap pages. Many parts of the Soudan are still unexplored, and its vast extent may be judged from the fact that the province of Kordofan alone covers an area greater than the whole of France. The population prior to Dervish rule was estimated at about 8½ millions, but war and disease reduced the figures to 1,870,500 in 1903. The bulk of the inhabitants are pagan savages, and many years are expected to elapse before they become civilised. The imports into the Soudan *via* Wadi Halfa during the past year amounted to 935,800l., including 319 tons of "drugs" valued at 18,829l., soap 207 tons valued at 6,600l., and spirits 561 tons 119,700l. (a large item). Altogether the imports were about 313,000l. E. in excess of those of 1903. The exports from the Soudan amounted to 303,500l., or practically the same as the figures for 1903. In view of the imperfect communication these figures are considered satisfactory. Included among the exports last year were 9,370,000 kilos. (187,400 cwt.) of "gum" valued at 211,000l. E., as com-

pared with 7,838,000 kilos. (156,760 cwt.) valued at 180,000*l.* in 1903. A report written by Professor Dunstan on the Soudan gum trade seems to have caused considerable discussion among the gum merchants. Professor Dunstan said, among other things, that the Soudan was in danger of losing its gum trade owing to the competition of Senegal gum and the efficient organisation there for collecting and sorting. On this point Sir Richard Wingate, the writer of the Soudan report, stated that "the merchants are not generally inclined to admit the defects of inefficient collection and sorting." The subject, however, is to receive the attention of the Soudan Government, but although it is practically impossible to introduce an improved system of collection, more attention will probably be paid to improve the system of sorting. We are likely to hear more of Soudan rubber shortly, and as the authorities are well aware of the harm done by promiscuous tapping of the rubber vines by irresponsible persons, they intend to formulate a definite scheme for the cultivation as well as the protection of the plant, before some of the best tracts are cleared. Allusion is made to the research work of Dr. Andrew Balfour at the Gordon College, Khartoum, the report of which, Lord Cromer says, cannot fail to be of great value to all interested in the medical conditions prevailing in the Soudan and in the economic resources of the country. Concluding, Lord Cromer remarks that the past year was one of unexampled prosperity in Egypt, and he believes many of the causes which contributed to that prosperity are of a permanent character, and now that the Anglo-French agreement has been signed there is additional justification for believing that 1905 will mark another step for progress and reform.

Pharmacy in the Transvaal.

By a coincidence we received on the same day that the granting of a Constitution to the Transvaal was made known the regulations drawn up by the Transvaal Pharmacy Board for registration as chemists and druggists in the Colony. We congratulate the Board upon a statesmanlike conclusion in regard to a difficult problem. They have practically adopted the standard of qualification existing in Great Britain, but this is not to be enforced until 1908. Until then a modified examination will, presumably, be provided, so that all who are in the Colony at present have ample opportunity to qualify by examination, if they have not yet done so. The Minor and Major certificates of Great Britain, the Licence examination of Ireland, and any other certificates of approved standard, are to be accepted in lieu of the examination, but in the latter case the applicants must be able to prove that in their own country chemists and druggists of Great Britain or Ireland may practise without further examination. This provision will mean that pharmacists of Continental Europe must pass the Board's examination before they can be registered in the Transvaal, just as it is with us. That is not, perhaps, calculated to please alien immigrants, but it is just.

Drug Companies.

Referring to this topical subject the "Medical Press" remarks that—

There is no doubt that all pharmacy legislation is founded on the principle of individual responsibility, the Acts not contemplating any other position than that of the proprietor of the business being the active and responsible member of it, and this being so they are framed so that high, and justly high, standards of knowledge and conduct are demanded of the chemist who seeks to trade. To reimburse himself for his professional attainments and the cost of their acquirement the chemist has in the past been in the habit of charging his customers such prices as he could

reasonably attach to his medicines, having regard to the skill required in their compounding. The price of a mixture is justly higher than the price of the bottle, cork, and drugs used, because of the essence of brains with which it is flavoured. If the chemist has to cut his profit the first thing that will go will be the brains, and the pharmaceutical profession, if it does not offer the prospect of a reasonable competency in the future, will attract men of a lower and lower type. As a whole, one is justly proud of the modern dispensing chemist, and the public owe him a great, though unacknowledged, debt. Doctor and public alike will suffer if a lower standard of individual is introduced in his place.

Our contemporary rather labours the point that the cutting of prices by drug companies may bring about such a condition. The facts are that individual chemists have met companies in this matter, and that companies do not encourage dispensing, experience having proved to them that it does not pay at cut rates. The element of brains comes in here, and in this connection we are pleased to note the effective reply to Sir Michael Hicks-Beach which Mr. Robinson, President of the Pharmaceutical Society, made at Bristol on Wednesday evening. He appears to have delayed this reply in order that it might be given to those addressed by Sir Michael, and it is a pity that it is not likely to have as wide publicity as the attack. Mr. Robinson is doing good service to the craft by such speeches, but we fear that the calls upon his time by so many provincial engagements are working towards shortening his period of presidency. A torpedo-boat is not the place for the admiral of a fleet, and that seems to be what is expected of Mr. Robinson at present, while his duties are on the flagship. If this continues it is not beyond the range of probability that the presidency may become vacant ere long.

"The Cock may Crawl."

"The Committee have not conceded a drop of free spirit," so the "Civilian" says, in referring to the report of the Industrial Alcohol Committee. If this is a reflection of the temper of the revenue authorities, no wonder there was so much special pleading and reference to research in the report; but we are disposed to think that the revenue authorities (we mean the men at the head) are not of that temper. Possibly they felt somewhat keenly the allegations that British industries have suffered through revenue restrictions, and the report to a considerable extent is an effort to prove that the allegations were not well founded, but straightway it proceeds to recommend alterations which will minimise the disabilities of British manufacturers. The latter, we daresay, will cry "quits" if the liberal spirit manifest in the recommendations is continued by those who will have the carrying-out of the amended law; and we hope there will be few "Civilians" amongst them. The West Indian Committee is also dissatisfied, and regards the report as "a striking instance of the deliberate ignoring of the interests of the colonial distillers for those of the home distiller," but admits that the report of the Committee "does bring the matter one step further forward, for it exposes the extraordinary weakness of the cause of the home distillers, who are deliberately accorded protection against their colonial brethren, and the more this is emphasised the more likelihood there is of redress being granted." The West Indian grievance is that rum has to pay 4*d.* per proof gallon of surtax when imported here, and if methylated it is treated as if it were pure spirit. "It is iniquitous that they [home distillers] should be protected against the distiller in the Colonies," says the "W.I.C. Circular." Are they really?

An Anti-Tobacco Crusade.

Mr. J. Rutherford Hill, Assistant Secretary of the Pharmaceutical Society, Edinburgh, is not a worshipper of Nicotina, but he has tried (in a crucible, be it said) six-

teen different kinds of tobacco, with the result that 86 per cent. of the samples went off as smoke and 14 per cent. remained as ash. In addition to the bare results, he discovered that the destructive distillation of oil contained in the rolled tobaccos tested evolved acrolein, whose special property is to bite the eyes and set the nose a-running. The liquid has not been before identified as the cause of the very disagreeable sensations to many at smoking-concerts, and also at public meetings. The "Lancet" has had its attention drawn to Mr. Hill's results by the Scottish Anti-Tobacco Society, the suggestion being that the irritating effects of tobacco are due to the combustion of oil. The "Lancet" explains that the proportion of oil, glycerin, or glucose added to tobacco is in most cases small and probably insignificant—an obvious conclusion, seeing that the revenue authorities look very sharply after the purity of tobacco and all other revenue-yielding articles. The combustion products of tobacco were investigated several years ago by Professor H. Thoms, of Berlin, who traced the toxic properties to pyridine bases. He worked on cigars.

Some Reflections.

Last week's "Truth" provided lively reading for makers of certain specialties. First to be pilloried was Mr. R. H. Thompson, 149 Strand, whose "Anticapilla" appears to be a depilatory. A lady who got 4s. 6d. worth of it found when she got it that it had to be used with a special shilling soap. That she also got, paid for, and used along with the "Anticapilla." "A painful eruption" followed, and as that was one condition on which she could get her money back she wrote for it. "Truth" tells the rest. Second on the list was the Peralia Perfumery Co., of North Shields, who make "Crimpoline" to make the hair curl. A London lady who spent 10s. 3d. on six bottles of it for her little girl's hair did not succeed in making it curl; she got angry, and wanted her money back; the company offered to show her how the thing should be done, but she has taken shelter in "Truth." Then comes "Mr. A. B. Griffiths, of Brixton, Ph.D., Hon. D.Sc., etc., etc.," whom "Truth" has been holding up to the world of scorn lately. Last week the exposure was two letters written by this gentleman offering to give testimonials to a tooth-powder and a turpentine-substitute. "Truth" is very pungent in regard to Mr. Griffiths and his guinea certificates, and extends the contempt to "The International Institute of Physiology and Hygiene," whose "director of laboratories" is "Dr. J. Grant Stephen, D.Sc., Ph.D.," and whose address is given as at East Ham, but we found it the other day at Mansion House Chambers also. It was a sample of bread that this "institute" offered to give a certificate to. Our contemporary returns to the "Liquozone" matter, reporting, amongst other things, that 250 persons are employed in the London office. In regard to this matter we have received anonymously some reprints of articles from American medical papers, which indicate that an undercurrent of competitive opposition may be the origin of the attack.

The Hahnemann Ter-Jubilee.

Samuel Hahnemann, the founder of homœopathy, was born on April 10, 1755, so that this year his followers have celebrated the 150th anniversary of his birth. Hahnemann was born at Meissen, in Upper Saxony, his father being a painter and designer of porcelain. As a boy Hahnemann was an insatiable reader and student. He was master of several languages, ancient and modern, before the age of twenty. He graduated M.D. at Erlangen in 1779. The first idea of homœopathy occurred to him in 1790, when engaged in translating Cullen's "Materia Medica" into

German. His first definite expositions of homœopathy occurred exactly a hundred years ago, in 1805, and five years later, in 1810, appeared his "Organon of Medicine," one of his most important works, in which the philosophy and practice of homœopathy were fully set forth. From 1812 to 1821 he was practising in Leipzig and lecturing under the authority of the Leipzig University. But during this period persecution had been steadily rising, and he was finally compelled to leave Leipzig and find asylum in Coethen, under the *agis* of Duke Frederic Ferdinand of Anhalt. In 1835 he removed to Paris, where he immediately acquired an immense practice, which he carried on till his death, on July 2, 1843. At the present day there are some 18,000 medical men practising after his methods throughout the world. In this country are several hospitals devoted to his methods, and an association—the British Homœopathic Association—with the new First Lord of the Admiralty, Earl Cawdor, at its head.

Under-estimation.

The Appropriation Account for the Army for 1903-4, recently published, makes sorry reading for the taxpayer. The sums granted by Parliament for Army services appear in a great many cases either to have been considerably under-estimated, or there has been a lavish prodigality of unnecessary expenditure. In a few cases there are agreeable surprises, for in Paper No. 3, in which particulars are given of estimated receipts as compared with actual receipts, there is a sum of 28,109l. 15s. more than estimated for medical establishment, pay, etc. In this case it was estimated that the amount received from the Government of India on account of medical supplies and men of the R.A.M.C. on board Indian troopships, together with miscellaneous receipts, would amount to 2,000l. It actually amounted to 21,653l. 12s. 2d., and further sums of 8,148l. 14s. for the China Expeditionary Force and 407l. 8s. 10d. for the Somaliland Expeditionary Force brought the total up to the sum named. But a different note is struck in Paper No. 4, where the pay, etc., of the Army Veterinary Department was 37,710l. 3s. 2d. more than the grant. The deficit is explained as owing to the retention in South Africa of an unexpectedly large number of horses and mules, requiring much veterinary attendance, the provision for civil veterinary surgeons and medicines being thus largely exceeded. The detailed account of the sum expended, compared with the sum granted, for the pay, etc., of the medical establishment and for medicines, shows a net deficit of 41,444l. The pay of the Army Medical Service exhibits a surplus of 20,230l. over the grant, "due to vacancies in the establishment of medical officers," but this is more than counterbalanced by a deficit of 44,187l. owing, it is explained, to the vacancies referred to, and to the temporary retention in South Africa of excess numbers of officers of the R.A.M.C., making it necessary to employ large numbers of extra civilian medical practitioners. The cost of medicines was 4,151l. more than the grant, and this is quaintly described as owing to "the cost of supplying artificial teeth—a new service for estimating which no reliable data existed." The expenditure on medical services in the China and Somaliland Expeditionary Forces was 48,303l. more than had been anticipated. The surplus of 28,109l. 15s. already mentioned is said to have been due to sales of drugs, etc., returned from South Africa as well as to credits given by India for medical equipment, etc., returned to India with troops employed in South Africa, China, and Somaliland. Paper No. 17 gives the value of stock on March 31, 1903, and on March 31, 1904, as shown by the ledger balances of storekeepers at stations at home and abroad. It is stated that the reserve stock of oils, paints, and chemicals was valued at

91,500*l.* in 1904, as compared with 83,700*l.* at the same date in 1903. This is exclusive of South African stations, where there were chemicals, etc., amounting in value to 15,200*l.* It has been decided that in future ledger accounts of the receipt and issue of medical stores will be kept by all advanced depôts in the field, and that instructions on the subject will appear in the next revise of the regulations for Army Medical Services.

Heroic Dosing.

We have been told that the days of heroic dosage are gone never to return. Our forefathers have been flouted in medical and lay journals for their "shot-gun" prescriptions and "impossible" doses, yet we find in a recent issue of the "Medical Press" a pill which will require not only courage but a comparatively large gullet to swallow. It is recommended in arthritic pharyngitis and its composition is as follows:

Chlorate of potash	...	...	3 drachms
Extract of eucalyptus	...	...	1 drachm
Cubebs powder	...	...	$\frac{1}{2}$ drachm

For one pill. Two or three before speaking or singing.

We shudder to think of the speech or song this dainty bolus would produce. Can it be that our omniscient contemporary has been caught napping and that "grains" and not "drachms" was meant?



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Why should chemists go bare-footed?

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Unless you are a chemist we cannot fit you.

Mr. JESSE BOOT writes:—"How I wish I was a chemist!"

SIR WILLIAM RAMSAY writes:—"I find your waders invaluable for my experiments in extracting gold from the sea."

LORD RAYLEIGH writes:—"Having to lecture before the Cork Apothecaries' Society next week on solar physics (with Mr. Healy in the chair), I shall be much obliged if you will send me a pair of brogues."

SIR JAMES DEWAR, F.R.S., writes:—"I found your liquid air pumps perfection at the Pharmaceutical Society's Cinderella. Unhappily I left one behind me at midnight. Perhaps you could assist me to recover it."

A FREE INSERTION.

THE above represents a page "advertisement" in that book of whimsical humour just published by Mr. Alston Rivers entitled "Change for a Halfpenny." It is written by the authors of "Wisdom while you Wait," and is an amusing skit on the Harmsworthian methods of journalism. It is not necessary to conjecture who "Books" are.

WITH the object of meeting the demand for alcohol in Manchuria and Corea, which is reported to be very large, some prominent saké brewers in Tokyo and Osaka intend to establish an alcohol distillery at Seoul with a capital of two million yen (200,000*l.*).

Trade Notes.

CALVERT'S CARBOLIC TOOTH-PASTE is now put up in collapsible tubes by the manufacturers, Messrs. F. C. Calvert & Co., Manchester.

THE "PIONEER" MILK-SUGAR, placed upon the market by the Pioneer Milk-sugar Co., 24 Minories, London, E.C., retails in 1-lb. tins at 1*s.* 3*d.* (not at 1*s.* 6*d.*, as stated last week).

THE PYRAMID SHOW-STAND for combs which Messrs. Southall Bros. & Barclay, Ltd., Birmingham, have introduced, is effective for display, and keeps combs in saleable condition. It occupies little space, and is always in view of customers.

PROTECTED.—The additions to the P.A.T.A. protected list during April included Carter's pills, Idris's lime-juice, "Javal" hair-tonic, "Penna" rubber bath and manicure brushes, Rankin's ointment and fluid extract of sennapods, and "Seccotine."

COOPER'S SHEEP-DIPPING POWDER, manufactured by Messrs. Wm. Cooper & Nephews, Berkhamsted, has been approved by the Board of Agriculture and Fisheries as an efficient dip for sheep-scab for the purposes of the recent order made by the Board.

"FROG-IN-YOUR-THROAT" WINDOWS have been numerous lately, and those who have had them are advised that photographs for competition should be posted to Messrs. John Morgan Richards & Sons, Ltd., 46 Holborn Viaduct, London, E.C., not later than April 30.

MR. JOHN MORGAN RICHARDS has received this week numerous postal and telegraphic congratulations on Carter's little liver pills being placed on the P.A.T.A. list at the minimum retail rate of 1*s.* Our subscribers should write for full particulars to 46 Holborn Viaduct, E.C.

DOLLE'S IRON-MILK was introduced into this market a few years ago by the British Iron-milk Syndicate, Ltd. The agency has now been transferred to Messrs. Thomas Christy & Co., Old Swan Lane, Upper Thames Street, London, E.C., who will supply it at the same prices.

THE "CAMERA HOUSE JOURNAL," issued by Messrs. W. Butcher & Sons, Farringdon Avenue, E.C., contains this month two prize offers—one for a photograph of a dog, and another for a solution of the mystery of "What becomes of ruby lamps?" There is also a clearance line of photographic goods which should attract.

OPTICAL SHOW-TABLETS.—Messrs. Raphael, Wheway & Redfern, Ltd., 51 Clerkenwell Road, E.C., have brought out an attractive set of aluminium show-tablets. The tablets measure 3 by 5 inches. Each is provided with a strut and eyelet, and is lettered in red and black. The wordings are "Aneroid Barometers," "Eyeglass Cords, Hooks and Chains," "Field, Marine and Opera Glasses," "Reading Glasses and Pocket Magnifiers," "Chatelaine Spectacle Cases," and "Thermometers for all Purposes." The tablets, which cost 1*s.* 6*d.* each, are very attractive and suitable for window-dressing purposes.

Recent Wills.

CHARNOCK.—The late Mr. Richard Stephen Charnock, aged eighty-four, of the Yorick Club, Doctor of Philosophy, left a gross estate of 12,074*l.*

SKUSE.—Mr. Edward Skuse, of 13 Randolph Crescent, Paddington, and Ashmore Works, Harrow Road, wholesale confectioner and patent-medicine manufacturer, who died on March 4, 1905, aged fifty-three, left estate valued at 6,253*l.* 3*s.* 1*d.* gross. Probate of his will, dated February 17, 1905, has been granted to his widow, Mrs. Cissie Eliza Agatha Skuse, of 13 Randolph Crescent, his son, Mr. William Skuse, Ashmore Works, Mr. Frank Hubert Boddington, 2 Pump Court, Temple, barrister-at-law, and Mr. Henry Bedford Murdoch, of 127 Maida Vale, W. He bequeathed 100*l.* to his wife, with the income from five-twentieths of the residue of his estate, and he left one-twentieth to Mr. C. Cooper, of Ashmore Works, two-twentieths each to his daughters, Elizabeth Mildred Boddington and Alice Ada Murdoch, two-twentieths to his son Douglas, and the remaining eight-twentieths of the residue of his estate to his said son, Mr. William Skuse.

Recent Bacteriology.

By W. HARRISON MARTINDALE, Ph.D.

AT the meeting of the Public Dispensers' Association held at St. Bride Institute, E.C., on Wednesday evening, April 26, the author delivered a lecture on this subject, which was fully illustrated with lantern-slides of cultures, micro-organisms, mosquitos, etc., diagrams also being exhibited, as well as numerous microscopes with specimens. The following paragraphs are selected from the lecturer's notes.

Ankylostomiasis.—The worm producing this disease (*Ankylostomum duodenale*) is about $\frac{1}{4}$ inch long and of a whitish colour. Its habitat is the small intestine of man, particularly that of the miner. It attaches itself to the mucous membrane, and no fewer than 1,000 of them have been obtained from one patient. The male and female worm are quite different in formation. The eggs produced by the female pass away from the patient—and as many as 8,000,000 have been delivered by a sufferer in a single day—and the small thread worm escapes from the egg. Mines afford an excellent hatching place for the young larvæ. The miners have only themselves to blame in the matter. Hygienic and sanitary measures are alone necessary to stamp out the scourge. As regards treatment, the worms are eradicated by strong doses of at least 10 to 60 grs. of thymol, with previous and subsequent purging by castor oil.

Anthrax.—*Bacillus anthracis* is probably the oldest bacterium known, inasmuch as it was associated with disease (splenic fever) as long ago as 1849. The organism almost always occurs as long filaments, particularly in broth cultures. The spores retain their vitality and pathogenicity for years in the dry condition. Martin has shown that the organism produces an alkaloid which is the fever producer, and an albumose which induces the coma. The malignant diseases which the organism produces in man have been satisfactorily treated by a serum introduced by Sclavo. A case was cured with this antiserum at St. Bartholomew's Hospital in January last.

Appendicitis.—Common intestinal parasites seem to be associated with this disease—e.g., *Ascaris lumbricoides* and *Trichocephalus dispar*. Chauvel has pointed out that appendicitis appears to be the most prevalent among meat-eaters, and notably beef-eaters. It is, on the other hand, unknown amongst Arabs or the Chinese. In certain religious communities in Brittany where meat is never eaten appendicitis is unknown.

Beri-Beri.—This disease infests the Federated Malay States and parts of China. Up to the present its cause remains a mystery. A coccus has been isolated resembling *staphylococcus pyogenes albus*, claimed to be motile. A bacillus also isolated from the blood in beri-beri is found in rice, and has been cultivated on rice water. It has also been suggested that the disease is due to arsenical poisoning. It has been found that the poorly nourished are much more liable to contract it than those well fed. Europeans and Sikhs escape the disease entirely.

Bilharzia (Endemic Hæmaturia).—Associated with this disease there is almost invariably the appearance of blood and pus in the urine. As to treatment, methylene blue is to some extent a novelty. Mercury perchloride intravenously is also given with good results, the solution consisting of 1 mgm. of perchloride in 5 minims of normal saline solution.

Cancer.—It has been asserted that cancer may be absent in certain countries. The importance of this being proved is enormous, for if this is due to some definite cause some definite step in prevention might be obtained. The Cancer Research Fund has already announced that malignant diseases are found in the cow, horse, dog, pig, sheep, mouse, cat, fowl, parakeet, giant salamander, cod-fish, gurnard, and trout. These facts have a very important bearing. For example the flagellate bodies in malaria were first of all demonstrated on the *Halteridium* parasite of pigeons. Doyen's serum (B.M.J. ii, 04,1181, L., ii, 04,1253, L., i, 05,644) has attracted considerable attention. Doyen has isolated a bacterium designated *Micrococcus neoformans*. He makes cultures direct from portions of tissues removed, and the organism is the basis and the active element of the serum he manufactures. The last report of the Imperial Research Fund gives details of a large volume of work. By transplanting tumours from one mouse to another highly potent serum was produced—at least in the test-tube. Plasmodiophora have been found (L., i, 05,215) in carcinomatous tumours. It has been suggested that to arrest the growth of the new tissue so as to prevent cell conjugation is a safe line for experimentation—whatever the cause may be. Some of the latest cancer researches will be found in L., i, 05,983, under the pen of Mr. Handley.

Cerebro-Spinal Fever.—This disease has just recently attracted considerable attention in New York, where it has been responsible for a large number of deaths. A diplococcus, evidently *Diplococcus intracellularis meningitidis* (Weichselbaum) has been isolated from the cerebrospinal fluid and from the brain membrane and the purulent exudate. It has been found in the nose in coryza and in rhinitic and otitic discharges. It is frequently associated with the pneumococcus and Friedlander's bacillus. This organism resembles the gonococcus in being intracellular, and in its shape, but has been cultivated without the presence of albumen, this marking it off sharply from the coccus of gonorrhoea. The latter is found in many parts of the body in severe cases.

Dengue Fever.—The intermediate host for the protozoon responsible for this disease is *Culex fatigans*, according to Graham.

Diphtheria has been thought to be a disease only to be found in temperate and subtropical countries, but Professor Castellani has demonstrated by experimental inoculation of guinea pigs that it is a cosmopolitan disease. Swabbings from the eye in conjunctivitis, particularly in children, often give films of an organism strongly resembling *B. diphtheria*. These are in all probability modified Klebs-Loeffler types. The Koch-Weeks bacillus, a thin non-motile organism decolorised by Gram's method, is formed in a large number of cases of conjunctivitis. Furthermore (L., i, 05,630) a diplobacillus is found which causes an extremely dangerous form of conjunctivitis, but is amenable to treatment.

Distomum Pulmonale and D. Ringeri are responsible for endemic hæmoptysis in Japan, Corea, and Formosa. It produces rusty or yellow sputum containing Charcot-Leyden crystals, chronic cough, bronchial catarrh with asthma or pleuritic attacks. Ova are found in the sputum, and are large in growth (about 0.1 mm. by 0.05 mm.), oval in shape and smooth with operculum. They appear when swallowed unchanged in the faeces, and probably develop in an intermediate host—perhaps the mussel. The parasites probably reach the various organs by perforating the intestinal walls.

Dysentery.—*Amœba coli communis* is sometimes found in the stools or mucus. There are said to be two types of dysentery—amœbic and bacillary. *Amœba coli* is the most important representative of the first class. The classification of the bacillary forms is as yet not satisfactorily settled, as they seem to be closely associated. Shiga's bacillus has the characteristic of elaborating alkali during its growth, whereas Flexner's bacillus is an acid-producing organism. There is the mixed infection of the amœbic and bacillary. This constitutes a third type, and it has not received the recognition to which it is entitled. The bacillus is probably in a resting stage in the human body, and breaks out into activity on occasions. With the acid-producing organism the blood gives a positive Widal reaction, whereas the alkali-generating one does not.

Filaria.—It has been found that more than a tenth of the population of Porto Rico have the embryos of *Filaria nocturna* floating in their blood. Elephantiasis in all its phases is very marked in the locality. The worm is introduced under the skin in the early stages by a mosquito's proboscis. There are a number of forms of filaria—*F. nocturna*, *F. perstans*, *F. denarquisti*. As to treatment, in cases of varicose groin glands (the commonest form) an authority in Fiji orders rest, and injects antipyrin and sodium salicylate, and applies locally ointment of guaiacol and menthol.

Leprosy is claimed to have been cultivated on a medium devoid of salt (see C. & D., March 11, 1905, p. 402). Leprosy occurs in parts of the world where a food deficient in nitrogen is consumed. On improving the diet in Jamaica the lepers have been reduced from 800 to 300 during forty years, though the population has been doubled in that time.

Malaria.—The mosquito theory of this disease was established by Major Ronald Ross, winner of the 1902 Nobel prize. *Culex pipiens*, or common mosquito, does not convey malaria although there seems to be some doubt about this. It is the spot wing, or *Anopheles maculipennis*, also belonging to the culicidæ which is responsible. [A large number of slides were here shown and described.] Malaria is classified according to the nature of the parasite found—

Benign tertian (T.)—This is mature in about forty-eight hours, the spore emission mentioned being responsible for the attack of renewed fever.

Quartan (Q.)—This completes its cycle in seventy-two hours. The fever is therefore less severe than the tertian. In this the parasites are smaller, movements not so pronounced, and the pigment granules coarser. The rosette contains six to twelve spores, and the red corpuscles retain their colour.

The third class is the Aestivo-autumnal (malignant) A.A. In addition there is frequently a mixed infection, e.g., we can have A.A. and T., A.A. and Q., Q. and T., A.A. Q. and T. Of close on 2,000 cases examined in India in 1903 and 1904, 933 were of quartan only. Treatment is invariably quinine, or

sometimes the time-honoured Warburg's tincture. The great things to be done in India and other places where malaria is prevalent may be summed up as follows:

1. To improve the surface drainage and prevent the formation of puddles where the larvæ can breed. Also to remove the vegetation surrounding such, and for the wealthy to do away with or cleanse weekly the ornamental waters in their gardens. Smoke is a wonderful protector against malaria, and it is customary in some parts to burn dung, etc., during the night in huts and stables.

2. Protection by means of wire gauze.

3. Distribution of quinine as in Italy and India.

The young *Culex* larvæ have been proved to survive desiccation for several months. Certain of the adult culices (*Culex impellans*) appear to prefer to attack birds rather than human beings, the avian blood being recognisable on dissection of the insect. It is a very remarkable fact that so far inoculation experiments on all animals excepting man have proved unsuccessful, and in this case the inoculation should be intravenous. Experimenters have found that malaria can be produced by allowing infected insects to bite healthy individuals.

The anopheles larvæ are easily found during the winter by fishing in the sun-exposed grass-surrounded pools in the infected districts in India. The method of killing the larvæ, and all other water insects, is simply to pour common kerosene on to the surface with the aid of a sprinkling water can. This forms a scum which prevents the larvæ, which are aerobic, from breathing atmospheric air. They die and sink to the bottom, or are washed on to the banks in countless numbers. Thirty lbs. of oil costing perhaps 2s. in India will cover at least 2,000 sq. yds. of water. The dose of paraffin should be repeated about twenty times during the year. Another useful method of abolishing the disease is to surround the buildings entirely with wire gauze, to eliminate the mosquito on the wing. Rice cultivation, with the necessary stagnant water, is no small source of increase of malarial disease. Major Ronald Ross, in a recent address, states that in spite of all ascertained facts *re* malaria, not one in twenty, even in malarial districts, believes the theory; but there are still a few difficulties to settle—*e.g.*, how it comes about that the proportion of infected mosquitos in a certain district was only 1.6 per cent., whereas the percentage of natives suffering from the disease was as high as 48.5 per cent. Again, large tracts of land in Erythraea have no human inhabitants. It is possible to contract malaria by sleeping there in the open for a single night. How does the insect causing that infection (which it undoubtedly does) become infected?

Peritonitis.—An organism of the nature of *Staphylococcus albus* has been isolated (L., 1/5, 473, 548,618). The organism more particularly associated with the inflammation, however, is the colon bacillus, and it is very frequently not associated with any organism at all.

Plague.—*Bacillus pestis* was shown under the microscope. Man is infected by inoculation through broken skin, or by the bite of insects, like fleas. During 1903 the total deaths from plague in India were 846,030. In the first three weeks of April, 1904 (the worst month) the number was close on 47,000 per week. The difficulties of combating the disease owing to racial prejudices were described graphically.

Relapsing Fever.—In a severe case of this disease terminating fatally (Journal Trop. Med. 1904, p. 24) the blood was found to be teeming with the *Spirillum Obermeieri*. It has not as yet been cultivated, but it is suggested that it is a stage in the life history of trypanosoma.

Septicæmia is associated with *Streptococcus*. The anti-streptococcus serum has been very considerably used during the last year or two for a variety of diseases. Speaking of antitoxins reminded the author of the fact that a zealous worker has extracted a serum of disagreeable taste from the muscles of guinea-pigs suffering from extreme fatigue; from this toxin-containing liquid an antitoxin has been made which will, if injected, render us immune to the effects of fatigue.

Trypanosoma was discovered by Castellani, but an Englishman, Dr. Adams, first entertained the idea that sleeping sickness is caused by trypanosoma. The following is a classification of some of the trypanosomes found up to the present:

T. Evansi (1880) causing Surra in India.

T. Elmastiani causing mal de Caderas in South America.

T. Brucei, found in cases of tsetse fly disease or nagana in Zululand, Bruce, 1894.

T. Rougeti (1896), the parasite of dourino or mal du coit occurring in South Europe, North Africa, and other parts.

T. Lewisii, non-pathogenic, found in rats. On injecting into other animals is removed by phagocytosis.

T. Ncpveui (1890), found in man in Algeria. Was called

T. Gambiense by Dutton, but this may be objected to as the parasite may not be confined to Gambia. Manson called it *T. hominis*. This is the only one found in man.

T. Castellani (November, 1902) found in Uganda by Castellani occurs in the cerebro-spinal fluid in cases of sleeping sickness. It is closely allied to *T. Gambiense*.

Trypanosoma is caused by the infection of a species of tsetse fly, *Glossina palpalis*. It is common in the Upper Congo and Uganda, *G. morsitans*, as shown by Bruce in 1894, being responsible for the nagana or tsetse fly disease in animals. Manson suggests that trypanosomiasis may be the preliminary stage of sleeping sickness. He originally advanced the theory that *Filaria perstans* is responsible for the malady. The Commission appointed by the Royal Society which left London in June, 1902, settled the question. It was definitely proved that *Filaria perstans* has nothing to do with it. Sleeping sickness was first described by Winterbottom in 1804. The incubation period of the sickness may, like that of hydrophobia, extend over two or three years. A case of this fever diagnosed by Manson on October 3, 1902, developed sleeping sickness in November, 1903, and the lady died on November 26 of the same year.

The anatomical changes effected by the parasite or poison produced by it are general emaciation, enlargement of the lymphatic glands throughout the body, particularly that of the central nervous system, and changes in the brain. As long ago as 1857 Livingstone correctly surmised the cause of the disease. As to the symptoms of the disease; there is first a swelling and inflammation where the insect has bitten, then there is fever, and erythematous rash on the face and body. After eight days there is a fall in temperature, then a rise again, and so on. The patient has a drunken appearance, marked weakness in the muscles, and general wasting and sometimes transient paralysis and thrombosis. Then prolonged lethargy sets in, not actual inclination to sleep. In order to stamp out the disease the glossina must be exterminated, but in addition immunisation experiments have been carried out, the principle being to pass a strain of trypanosoma through different races of animals until a certain degree of virulence is lost. This has already been carried out by Koch with success in the allied disease surra. The glandular enlargements in sleeping sickness are probably caused by the arrest of the trypanosome in the glands, where, indeed, many of them are destroyed, but whence some escape from time to time into the blood, and thus produce the increase which has been observed in the peripheral circulation.

Tuberculosis.—It seems probable that the tuberculosis bacillus, *B. diphtherie*, and the glanders bacillus will ultimately be removed from the group of true bacteria to streptothrix, on account of their occasionally producing branched structures, and under certain conditions forming fine swollen ends, like conidia on the fungi. Koch's statement that the tubercle bacilli of animals and man are quite distinct, and that the bovine was not communicable to man, is disproved by (L., i, 05,658) exhaustive work, which proves the unity of the organism. Tuberculo-albin is a recent addition in the way of treatment, but details of its preparation are not vouchsafed by the manufacturer. The deaths from tuberculosis amount to 60,000 in England and Wales alone in a single year.

Typhoid Fever.—The fact that in China enteric fever in epidemic form rarely occurs is, according to one authority, due to the fact that the Chinese drink tea instead of water, congee instead of milk, and that uncooked food is seldom taken. It is stated that watercress may be responsible for typhoid, but that supplied to London is claimed to be bacteriologically pure.

Vaccinia.—By the kindness of Dr. Renner a selection of lymph and apparatus for collecting and preserving were shown. The new King Institute just opened in Madras has a vaccine section which yields sufficient vaccine to vaccinate 150,000 people a month. This is a gigantic preventive step and a pregnant "set-off" to the antivaccinators' agitations. The antivaccinators might glance at B.M.J. i, 05,769, in which they will find a vaccinated baby which was nursed by its mother who was suffering at the time with confluent small-pox—the baby remaining in perfect health throughout the entire infected period. Chloroform vapour has been shown to be capable of killing off the extraneous organisms in the lymph without damaging the amœboid protozoon which is the active agent.

Yellow Fever.—This is probably a mosquito-infected disease carried by *Stegomyia fasciata*. The specific germ of yellow fever, *Filaria Baneroffi*, has its permanent host in the mosquito, undergoing sexual reproduction in the human blood, the exact reverse of what takes place in malaria, in which man is the permanent host. The germ of yellow fever must, therefore, be searched for in the mosquito. A bacillus designated *B. icteroides* has been found in the disease, but this is not the important feature. The infected insect lives a long time, and it can transfer the fever as long as it lives (fifty-nine days has been recorded). It hibernates in the United States, but if the infected adults hibernate, either a very large proportion of them die, or else the infecting parasite must generally die in the mosquito—the first seems probable. It is a house mosquito essentially. Dried specimens of this and other mosquitos were exhibited.

Marriages.

BAKER—NORTON.—At St. Jude's Church, Earl Shilton, on April 25, by the Rev. J. Slade Maughan, Vicar, Charles Ballard Baker, pharmaceutical chemist, son of Mr. M. Baker, chemist, Nuneaton, to Mabel Kathleen, second daughter of Mr. and Mrs. A. J. Norton, Northleigh, Earl Shilton.

DAVIES—JACOB.—At Holy Trinity Church, Sydenham, on April 18, by the Rev. John Schor, John James Davies, chemist, 26 Dartmouth Road, Forest Hill, to Eliza Rosie Loda, eldest daughter of Mr. Evan Saunders Jacob, of Pencader, Carmarthenshire.

GILCHRIST—BEATON.—At the United Free Church, Turriff, on April 19, by the Rev. William Logan, B.D., assisted by the Rev. John Scott, United Free Church, Auchterless, and the Rev. Joseph Fraser, United Free Church, Kinneff, Adam Gilchrist, chemist, Kelso, to Ella Mary, daughter of Mr. James Beaton, J.P., Aspenbank, Turriff.

GOODALL—TEAGUE.—At St. Catherine's Church, Lincoln, on April 18, by the Rev. C. H. Creasey, Horatio Charles Goodall, chemist and druggist (of Dolbear & Goodall, late Hitchcock & Co.), Oxford, to Florence Mary, daughter of Mr. J. H. Teague, Creston Villa, Lincoln.

KINGZETT—LUNNISS.—At the Church of the Annunciation, Chislehurst, on April 25, by the Rev. H. Lloyd-Russell, assisted by the Rev. A. E. Rubie, D.D., Eric Paul Kingzett, second son of Mr. C. T. Kingzett, F.I.C., F.C.S., of Elmstead Knoll, Chislehurst, to Constance Marion Lunniss, of Heathfield, Chislehurst, second daughter of the late Mr. Fred. Lunniss, of Stutton.

KNOBLAUCH—BOWMAN.—At Dalmeny Street United Free Church, on April 20, by the Rev. B. G. Rouse and the Rev. James Adamson, M.A., B.Sc., Bonnington United Free Church, and Pastor Reimer, German Church, Edinburgh, Leopold Septimus Knoblauch, to Florence Harris, younger daughter of Mr. John Bowman, of Smith & Bowman, chemists, Leith.

MALLINSON—MILLER.—At 23 Springvalley Gardens, Edinburgh, on April 22, by the Rev. Walter Brown, M.A., the Braid United Free Church, George Arthur Mallinson, chemist, Withington, Manchester, to Laura Jessie, only daughter of Mr. G. L. Miller, teacher, late of Berwick-on-Tweed.

MAW—BEALL.—At the Parish Church, Kenley, on April 25, by the Rev. George Trentham Maw, brother of the bridegroom, assisted by the Rev. L. Harding Squire, Vicar of the parish, and the Rev. J. F. Gilderoy Glossop, Frederick Trentham, third son of the late Charles Maw, of Holmesdale, Nutfield, Surrey, to Gladys Mary, elder daughter of Philip L. Beall, of Lightwood, Kenley, Surrey.

PEARSON—KELLOW.—At St. Paul's Church, Salisbury, on April 19, by the Rev. E. N. Thwaites, William James Pearson, chemist and druggist, dispenser to the General Infirmary and Dispensary, Burton-on-Trent, to Florence Gertrude Kellow, of Salisbury.

SCHMIDT—DRIVER-HOLLOWAY.—At St. Mary's Church, Beddington, on April 26, by the Rev. H. Hodgson, Vicar, assisted by the Rev. T. Bentham, Henry Theodore, youngest son of the late Mr. C. A. Schmidt, Herne Hill, to Jane Celia, youngest daughter of Mr. H. Driver-Holloway, Beddington House, Surrey.

TIFFANY—HORSLEY.—At the Registry Office, Halifax, on April 20, John William Tiffany, chemist and druggist, Halifax, to Edith Ann, eldest daughter of Mr. E. Horsley, of Halifax.

AT HOME AND ABROAD the CHEMIST AND DRUGGIST is indispensable to chemists and druggists. One who has recently gone out to South Africa (195/51) writes under date March 29: "I am glad to see your journal is as popular here as in the old country. I wish it further success."

TOOK ALL PRECAUTIONS.—"Mr. Jinks," said the schoolmaster, "your boy is ambidextrous." "I don't see how that can be," said the indignant father, "he hain't never been exposed to it. He has been vaccinated, is bathed reg'lar every week, and his mother provides him with a little bag of assafiditty tied round his neck!"

Deaths.

BARRY.—At Westbury, near Bristol, on April 22, Mr. Frederic Barry, chemist and druggist. Mr. Barry, who died after four days' illness from pneumonia, was a man of ripe judgment, wise counsels, and cosmopolitan tastes. For many years he had lived on the Continent, and was intimately acquainted with both French and English literature. He had considerable reputation as an antiquary and scientist, and to a district guide which he issued for Westbury last year he contributed an interesting article dealing with the history of Westbury in detail. In the guide for the present year there appears a very instructive article by him, the subject being "How the World was Born."

JESSOP.—At 96 Manchester Road, Nelson, on April 22, Mr. Samuel Jessop, chemist and druggist, aged forty-four. Mr. Jessop, who died after a very brief illness, served his apprenticeship with Mr. Samuel Cardwell, of Brighouse, and he had been in business at Nelson for about twenty years. A few weeks ago he was a successful candidate for a seat on the Nelson Town Council and during the election he caught a cold which developed into pneumonia.

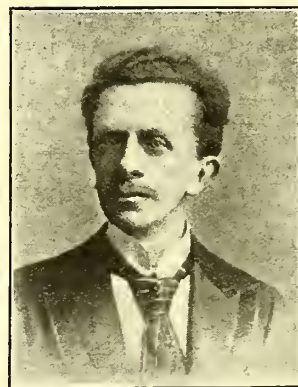
KITCHIN.—At 120 Nithsdale Road, Pollokshields, on April 20, (Nurse) Agnes Scott Warnock, wife of Mr. George Shiach Kitchin, chemist and druggist, aged thirty-five.

NEWTON.—At Thorn Bank, Stalybridge, on April 21, Sarah, the dearly loved mother of Mr. Arthur Newton, manufacturing chemist, 35 King's Avenue, Old Trafford, and of Mr. Albert Newton, chemist and druggist, Thorn Bank, Stalybridge.

NICHOLSON.—At 52 Heaton Lane, Stockport, on April 17, Mr. Francis Edward Nicholson, chemist and druggist, aged eighty-five. Mr. Nicholson was a native of the town, where his family has resided for considerably over a century. He commenced business at 60 Heaton Lane, nearly sixty years ago, but subsequently removed to larger premises at 50 Heaton Lane, where he was succeeded by his son, Mr. John Nicholson, chemist and druggist, over twenty years ago.

YATES.—On April 18, at St. Hilda, Elsworth Road, Regent's Park, London, Mr. Robert Yates, pharmaceutical chemist, late of Messrs.

Davy, Hill & Co., 64 Park Street, Southwark, aged sixty-four. The late Mr. Robert Yates entered the employment of the firm in May, 1865, the style of the business being then known as Davy, Yates & Routledge. He studied at the School of Pharmacy, and in the 1866 session took (like his brother, Mr. Francis Yates, ten years earlier) certificates in botany and materia medica and in chemistry and pharmacy, as well as the practical chemistry medal. He passed the Major examination in July, 1866. In 1874 he became a partner, with his brother, in the firm of Davy, Yates & Routledge, and remained after he retired in 1896, when the firm (then Davy, Yates & Hicks, Mr. Alan Hicks having joined the partnership) was amalgamated with A. S. Hill & Son. Mr. Robert Yates remained in the business until 1901, when Mr. A. B. Hill and he retired, leaving the business to be carried on by Mr. Alan Hicks and Mr. C. A. Hill, B.Sc., F.I.C. Mr. Yates took a prominent part in the firm's business, but was comparatively unknown to the majority of members of the wholesale drug-trade, as his work chiefly lay in the superintendence of the counting-house. For the past six years he had had very poor health and had had a paralytic stroke. He leaves a widow and several children. It may be mentioned that the name of Davy appears in the records of the firm about 1760, when the firm's name was Taylor, Davy & Co., and its headquarters 52 Little Britain, E.C.



Legal Reports.

Sale of Food and Drugs Acts.

OLIVE OIL.

At the Otley Police Court last week Mr. Albert Penn, described as a chemist, Kirkgate, Otley, was charged with selling half a pint of cotton-seed oil as olive oil. For the defence Mr. Edgar C. Newstead (solicitor) stated that, having run short of olive oil in the shop, Mr. Penn sent the boy upstairs to replenish it out of the cask, and the boy drew cotton-seed oil instead of olive oil. A fine of 40s. and costs, or one month's imprisonment, was imposed.

Bankruptcies and Failures.

Re HERBERT H. HUSBANDS, Willoughby Street, Lenton, Notts, Chemist and Druggist.—The trustee reports the completion of the winding-up of the estate. The assets, after meeting the costs, etc., admit of the payment of a first and final dividend of 2s. 8½d. in the pound to the unsecured creditors.

Re JOHN THOMAS HALL, 28 and 30 Bolton Road, Atherton, Bolton, Druggist and Drysalter.—The accounts herein show gross liabilities amounting to 1,830l. 14s. 4d. (unsecured 1,799l. 14s.), and assets estimated to produce 234l. 12s. 8d. Debtor, who attributes his failure to bad trade, illness, and heavy expenses, took over the business of his father, a chemist and drysalter, of 55 Bradshawgate, Leigh, in 1898. Debtor agreed to pay 7½d. for the business, but nothing has been paid. Owing to bad trade and competition the business was not successful, and debtor removed to Atherton with the object of conducting a wholesale business only. He offered a composition, and as it was refused he filed his petition. At the meeting of creditors on April 22 the estate was left in the hands of the Official Receiver for winding up. The following are creditors: John Hall, Southport (915l. 11s. 2d.); J. Waterworth, Leigh (170l.); W. Robinson & Co., Manchester (53l. 3s. 7d.); Bleasdale, Ltd., York (44l. 10s. 7d.); Hill, Evans & Co., Worcester (35l. 13s. 7d.); R. Swalley & Co., Bolton (26l. 8s. 7d.); C. Harrison, Manchester (20l. 13s. 7d.); W. H. Williamson, Son & Co., Manchester (17l. 17s. 4d.); Mayol & Co., Salford (19l. 5s. 10d.); Oldfield, Pattinson & Co., Manchester (18l. 10s. 11d.); Blyton, Astley & Co., Manchester (19l. 16s. 6d.); R. Gilson & Sons, Manchester (17l. 14s. 11d.); Reekitt & Sons, Ltd., Hull (17l.); Hanger, Watson & Harris, Ltd., Hull (16l. 4s. 7d.); John Thompson & Co., Ltd., Liverpool (13l. 11s. 7d.); E. Harris & Co., Liverpool (13l. 6s. 5d.); Dee Oil Co., Ltd., Chester (12l. 13s. 11d.); Blake & Mackenzie, Liverpool (11l. 0s. 3d.); Cambrian Vinegar Co., Leeds (10l. 15s.); Shirley Bros., Ltd., Manchester (10l. 13s. 3d.).

Gazette.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDER.

Richmond, Charles Ernest, Warrington, physician and surgeon.

ADJUDICATIONS

Lyle, William, trading as W. Lyle & Co., and as T. Crow & Co., Berwick-upon-Tweed, wholesale chemist and house-painter, lately retail chemist and druggist.

Spence, Samuel George, Ilkeston, Derbyshire, artificial-teeth manufacturer.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Clarkson, Kenneth Cliff, Bangor, Carnarvonshire, formerly Leicester, now an hotel keeper, formerly a surgeon-dentist—discharge granted conditionally.

Escreet, Frederick William, Kingston-upon-Hull, wholesale confectioner and druggist, trading with T. A. Smith and H. E. Walker, under the style of Escreet, Smith & Walker—discharge suspended for four years ending March 29, 1909.

Martyn, George, late Orchard Street, Portman Square, W., physician and surgeon—discharge suspended for two years ending March 24, 1907.

Wilmot, James, Clifton Crescent, Old Kent Road, London, S.E., late Watford, Hertfordshire, late mineral-water manufacturer—discharge suspended for two years and six months ending September 20, 1907.

New Companies & Company News.

S. J. MCGUINNESS, LTD.—Registered in Dublin. Capital 100l., in 1l. shares. Objects: To carry on the business of artificial-teeth manufacturers, extractors, stoppers, regulators, etc. Registered office, 20 Abercorn Road, Londonderry.

BRITISH RESIN WORKS, LTD.—Capital 500l., in 1l. shares. Objects: To carry on the business of manufacturers of and dealers in resin and resinous substances and products, chemists, druggists, drysalters, oil and colour men, etc. The first subscribers are: W. B. Hardy, 64 Victoria Street, S.W., gentleman; P. J. Bircher, 64 Victoria Street, S.W., electrical engineer; E. M. Harwar, 5 York Buildings, Adelphi, W.C., journalist; P. Collins, 61 Kilmorie Road, Forest Hill, S.E., publisher; J. S. Rowlatt, 89 Highgate Road, N.W., clerk; E. A. Sanderson, 38 Fordel Road, Catford, accountant; and W. Webb, 22 Cathcart Hill, N., clerk. No initial public issue. Registered without articles of association.

ROGEES, SMITH & Co., LTD.—Capital 2,000l., in 1l. shares (1,400 five per cent. cumulative preference). Objects: To take over as going concerns the businesses of pharmaceutical chemists, wholesale and retail druggists and herbalists, dealers in chemical and herbal sundries carried on by A. Smith and his trustees at 33 Shudehill, and by O. R. Rogers at 18 Dantzic Street, Manchester, and to adopt an agreement with O. R. Rogers. The first subscribers are: O. R. Rogers, 45 Half Edge Lane, Eccles, drug merchant; A. Smith, Norman Terrace, 153 Henderson Street, Levenshulme, chemist and druggist; S. Harrop, 26 Victoria Street, Ashton-under-Lyne, warehouseman; J. Rogers, 45 Half Edge Lane, Eccles, bank clerk (retired); R. Innes, 10 Norfolk Street, Manchester, solicitor and notary; H. Roberts, 7 Ash Grove, Victoria Park, Manchester, pharmaceutical chemist; and G. E. Haworth, 4 Clarence Street, Manchester, C.A. No initial public issue. Registered without articles of association. The first directors are O. R. Rogers, A. Smith, and H. Roberts. Registered office, 23 New Brown Street, Manchester.

DAVID THOM & Co., LTD.—Capital 85,000l., in 1l. shares (64,000 preference). Objects: To acquire the business carried on as David Thom, Domeier & Co., Ltd., to adopt an agreement with the said company, and to carry on the business of soap, glycerin, oil, tallow and chemical manufacturers, candle makers and merchants, chemists, druggists, drysalters, oil and colourmen, importers and manufacturers of and dealers in pharmaceutical, medicinal, chemical, industrial and other preparations and articles, explosives, compounds, cements, oils, paints, pigments and varnishes, paint and colour grinders, makers of and dealers in proprietary articles, etc. The subscribers are: T. Wilson, J.P., Derby House, Eccles; J. Schofield, 322 Liverpool Road, Patricroft, grocer; C. Payne, Laburnam Villas, George Street, Cheetham Hill, Manchester, wholesale confectioner; A. Freys, Westfield, Station Road, Pendlebury, near Manchester, works manager; H. Agnew, 29 Brook Street, Manchester, solicitor; A. L. Ormrod, 10 Half Moon Street, Manchester, stockbroker; and W. W. Baker, 25 Oxford Road, Altrincham, managing clerk. No initial public issue. The first directors are J. Schofield, A. Freys, O. Unglaub, T. Wilson, C. Payne, and J. Buller. Qualification, 200l. Remuneration as fixed by the company. Registered office, White Lane Works, Pendlebury, near Manchester.

PORCHERINE, LTD.—The report of Porcherine, Ltd., for the year ended December 31, 1904, states that the gross profit for the twelve months, including the balance brought forward from the last account, amounts to 1,345l., and after paying the ordinary working expenses, there remains a sum of 418l. to be dealt with. After providing for income-tax and writing off 66l. as a further reserve against bad debts, the directors have distributed 250l. as directors' fees for the year, being one-half of the total amount to which they are entitled under the articles of association, leaving 101l. to be carried forward.

PROFESSIONAL AND CIVIL SERVICE SUPPLY ASSOCIATION, LTD. The report of the Committee of Management of this Association (whose headquarters are in Edinburgh) states that the profit for the year ending January 31, 1905, amounted to 3,070l. 18s. 5d., which the committee recommend should be applied as follows: (1) In payment of a dividend at the rate of 10 per cent. per annum on the members' capital, 1,850l. 8s.; (2) in writing off the amount expended on fixed stock during the year, 208l. 14s. 11d., leaving a balance of 1,011l. 15s. 6d., which will be added to the balance at the credit of profit and loss account at January 31, 1904—14,864l. 14s. 6½d.—and carried forward. The amount of the sales in the various departments for the year ending January 31, 1905, shows a net decrease of 11,229l. 5s. 2d. compared with the former year.



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

Beware of "John Islip."

Mr. W. F. Charles, of Loughborough, writes: "Mr. J. Islip is evidently still in practice. He managed to get some samples through our sample department, and sent us the enclosed order. We requested cash on *pro forma* invoice, but have not heard from him since. I take him to be the man you have frequently warned your readers against. He is evidently a reader of society journals, and would find us in one of them." The letter which Islip sent to Mr. Charles was as follows:

"Wyfield,"
Lady Margaret Road,
Southall,
Middlesex.
April 4, 1905.

DEAR SIR,

Thank you for your second sample perfume, which arrived quite safely this time. Please send a 5/6 bottle Carné perfume, a 5/- bottle White Rose, a ditto Sweet Pea blossom and three 2/- and one 4/- box of Soap—12 tablets in all.

Yours truly,

The Manager.

J. ISLIP.

We again warn our readers that Islip has served a term of imprisonment for getting goods and not paying for them.

Mr. Boot and Chemists.

SIR,—We do not expect Mr. Boot to submit tamely to anything that will injure his material interests. The question is, Have the companies who have usurped the title "chemist" been building upon a right foundation? If not, the company house, as far as titles are concerned, must eventually fall. I would remind Mr. Boot that there are unwritten laws of justice and truth, and that the titles were intended to be restricted to qualified persons is an acknowledged fact. Besides, what is 30,000*l.* to a firm like Boots', who have to depend upon qualified chemists in order to carry out their system?

Will Mr. Boot again state publicly for the benefit of the craft what he is prepared to do in the matter? If I remember rightly, Mr. Boot once wrote to a contemporary of yours stating that he would support legislation which compelled every firm or individual carrying on business as a chemist to have each branch in charge of a qualified man. I am surprised to find misstatements in Mr. Boot's letter. It is not a fact that companies can only sell through the hands of qualified persons. In this town, at a certain shop owned by a limited company prominently displaying the title "dispensing chemists," an apprentice was employed as manager, and he repeatedly sold and dispensed poisons. The usual proceedings were taken, but before anything definite could be done he was moved some distance away, and the summons could not be served. In what respect is the company liable under the Pharmacy Act? As to the charge that chemists are fighting for their own interests, what is Mr. Boot doing—fighting for the public good? Let him educate the public on the subject and he will do chemists a favour. As to stopping competition by Act of Parliament, this has never been attempted. Legitimate and fair competition we are prepared to meet, but what we want is a fair field and no favour. Mr. Boot has often stated that the Pharmaceutical Society is a trade society—a most unjust imputation: it would long ago have been up with company chemists had that been the case. To make the Society a trade union would be a last resort among most men, and yet perhaps that will be the result if all other efforts are unavailing. There are, I suppose, nine thousand chemists in business in Great Britain. Let us imagine a united trade standing shoulder to shoulder against injustice. It would only mean a contribution of a few shillings weekly from these nine thousand

to pay the Boot's men their full salary until again absorbed by the trade. It might well be disquieting to company directors to contemplate this, as it would be an effectual though drastic way of settling the question. Whom the gods wish to destroy they cause to be blind—to results; and I venture to say that Mr. Boot by his action *re* the Pharmacy Bill has not only made himself unpopular with the trade, but has bred disaffection among his own employes. Let chemists arouse themselves and arm against our common enemies, firstly putting their own houses in order, and the history of the next twenty years will be the reverse of the last.

Yours truly,

JUSTITIA. (201/35.)

SIR,—Mr. Boot somewhat egotistically says that he cannot enter into a controversy his letter is sure to raise. My letter is not intended for Mr. Boot's eyes. Inside the lines at which the civil law interferes a wide latitude is allowed for individual interpretation of the moral law, and my interpretation differs so widely from that of unqualified men who enter the drug-trade through the Companies Acts that I would not care to enter into controversy with any of them. Controversy is indeed impossible where interpretation of the moral law is so different. Here I may remark that it is almost incredible that a man in the position of Sir Michael Hicks Beach should fail to see the injustice of the State demanding special qualification for special service, and then making it possible for somebody not qualified to gather in the wages for such service. We expect a very high moral tone in our statesmen, but in these days of company-promotion we have, in high quarters, departed far from the interpretation put on the moral law by such men as Gladstone, Bright, and many other great leaders, on both sides of the House of Commons, now passed away. Indeed, I am inclined to think that the greatest harm done to this country by the Companies Acts might well be put down under the heading "moral damage." In future it may be necessary for us to set up three codes of moral law—one for common people who wish to live respected and die honoured, a second for company-promoters, and a third for common swindlers and blacklegs. So far as I can see, it would only be in the third class that the moral and civil law would come into conflict, and yet the poor beggar who enters his neighbour's house by the aid of a crowbar at night has his own interpretation of the moral law, and no doubt feels good inside from a contemplation of it. I hope chemists in Sir Michael Hicks Beach's constituency will not humiliate pharmacy by approaching him again. Let them whisper to him next through the ballot-box, and if his constituency is like others at the present time, it will not take a big kick to tip the beam.

Mr. Boot threatens to bestow more attention on drugs in future. Have we here a merely petulant threat, or an acknowledgment that hitherto he has only been successful with patents? I do not very well see how he can give more attention to drugs than he has given. He has, in my opinion, done his best—or his worst—in that line; but if he can do for genuine galenicals what companies generally have done for quacks, he may become unwittingly a real benefactor to pharmacy. Nobody denies that limited companies are mainly responsible for the tremendous flood of quackery which submerges this country, and yet there are more quack medicines sold in the 9,000 chemists' shops than are sold in the 2,000 companies' shops; in other words, although chemists do not consider that selling quack medicines is their special function, they reap more benefit from them than companies' shops do. Should these companies succeed in driving the people away from quackery back to genuine well-known galenicals, chemists will again be the largest gainers. Mr. Boot and other company managers will do well to think of this. There is still a moral force behind the qualified man which all this outside competition is helpless to break down, and in the eyes of the people the qualified man is gaining strength every day. These company men are mistaken if they think they can "boom" both quack medicines and genuine drugs. There is no room in the drug-trade for both. In fact, I always think that a man of the energy of Mr. Boot has made a great mistake in touching a hampered business like ours. He ought to have gone in for pork, drapery, grocery, ironmongery—in almost any other line he would have become a second Lipton; but he will never make much of the drug-business. He is quite right

when he says companies have been held responsible for damages. I have pointed out oftener than once the confusion which has arisen from the fixing of responsibility on a mere employé in any circumstance. If poison is sold, the unqualified employé is fined or imprisoned and not the unqualified master; if poison is sent out in a wrong kind of bottle, the unqualified master is not responsible, and Mr. Boot has said it is the assistant who ought to be fined; if a death results from a mistake, it has been held that the company is responsible. Holding an assistant responsible for the kind of bottle used for poisons is holding him responsible for the kind of stocks kept, although he is a mere subordinate and has nothing to do with buying in stocks. It is to put an end to all this confusion that the new Pharmacy Bill is drawn up, and Mr. Boot probably knows this well enough.

Dumfries, April 24.

JAMES REID.

SIR,—As an employer I had occasion to advertise for an unqualified assistant a short time ago. Among the numerous applicants were a surprisingly large percentage of ex-Boots men. This being the case, may I suggest that my fellow-chemists in business (many of whom, like myself, suffer severely from the effect of company pharmacy with unqualified directorate) should in their own interest treat these traitors' applications for a berth with a polite but firm negative? If a man before entering the service of these parasites knew that he would have some difficulty in obtaining another situation after leaving, he would hesitate before joining them.

Yours etc.,

M. P. S. (202/9.)

SIR,—I notice that Mr. Boot is extensively advertising in the daily papers that according to the "Times" one million pounds a year is saved by customers who deal at his shops for their drugs and chemicals. Now, Sir, this works out that each shop saves its customers 3,000*l.* per annum or 60*l.* a week. I venture to doubt if the total takings of some of them amount to 60*l.* a week, and also if many of their best branches do 100*l.* a week in drugs and chemicals alone. Again, if the public have saved 1,000,000*l.* since Boots have started, chemists must have lost it. Let us see how this works out. Presuming there are 20,000 chemists' shops in this country, then each shop has dropped 500*l.* in its annual profit. How ridiculous to anyone acquainted with the drug-trade, yet how readily this gross misstatement will be swallowed by an unsuspecting British public! If Messrs. Boots' shops are so flourishing, why is not an annual balance-sheet shown of all the companies? Mr. Boot seems anxious to take the public into his confidence; surely here is an opportunity to enlighten them on a matter that would be of considerable interest.

Your obedient servant,

INQUIRER. (202/12.)

P.S.—I put the chemists' shops at 20,000, but I am not sure if this is correct. I take it, however, as an outside estimate.

[More than double, we think.—EDITOR.]

SIR,—A valiant warrior of old, yclept Bombastes Furioso, once hung his Boot upon a tree and challenged the world to meet him in single combat. The days of chivalry are not for ever fled, as, alas, so many would have us think, for in your last issue a sturdy knight of the good old school of Bombastes Furioso, gaily couching his deadly goose-quill, proudly issues his cartel of defiance to fiery knights of the pestle and threatens to seriously compete with them in the drug-trade, because they are promoting a Bill in Parliament by which persons who are not chemists are to be legally prevented from describing themselves as such. Some three thousand years ago, one of the famous major Hebrew prophets prophesied that "a rod should come out of the stem of Jesse, and a branch should grow out of his roots." The world at large has contended that the prophecy was fulfilled many, many hundreds of years ago, but the threatening letter signed "Jesse Boot" seems to point to the proverbial repetition of history. For would it not be a rod indeed, not only to genuine chemists and druggists but to the public at large, were Jesse's threat to vigorously compete—in other words, "cut" prices—in the drug-trade, carried out, and yet another branch should grow out of Jesse's root, an important addition, indeed, to the three hundred branches now scattered over the country?

But what would it mean to our national life were drugs still more cheapened, and they ousted the already ultra-cheap peppermint lozenges, pineapple drops, chocolate creams, and other popular forms of "sweeties" from their important place among the light refreshments of our "Island Mastiffs"! At one of the branches which have grown out of Jesse's root in the Edgware Road, I note an illustrated attack (a species of rod from the stem of Jesse) on the action of the Pharmaceutical Council in promoting the Pharmacy Bill, which merely aims at preventing a company of salts and senna and other delectable drugs divi-hunters from labelling themselves as chemists when they are not. Jesse charges the Council with simply promoting the Bill for personal profit by killing competition in the retail drug-trade, and holds himself and other opponents of the Bill up to a discerning British public as the most disinterested of individuals, with the public interests alone at heart. Yet, methinks, Jesse doth almost protest too much, for at the same time he emits a terrible wail over the big loss which would be entailed on his company were the bill to pass and they were compelled to alter the legend over the costly fronts of their three hundred branches which announce them as "Cash Chemists."

Yours faithfully,

Marylebone, April 24.

J. U. NIPER. (201/73.)

SIR,—We have this week had the first instalment, of what is no doubt a series, of as scurrilous a set of advertisements as was ever issued against a body of men honestly striving to fulfil their duties to the community, and I would ask you, Sir, How much longer are we going to put up with this sort of treatment without trying to do something in our own interests to counteract their effect? Mr. Jesse Boot's aim, as disclosed in his question, "What has become of the chemists in the districts covered by the operations of his company?" is truly a most noble one, and his answers must give him great satisfaction. He says some have surrendered at once and have become assistants in his company. Others have actually had the audacity to oppose him and have "*clung*"—mark the word!—to their own. What a pity he does not complete his picture and say that the rest have probably become bankrupt and lost their all, and are now either pensioners of the Benevolent Fund or in the workhouse. Chemists are able to appreciate at their proper value such statements as:

- (a) The independent investigation by the "Times";
- (b) the sum, said to be 1,000,000*l.*, saved annually by the public; (c) the assurance that the safety of the public is amply safeguarded when, as admitted in his advertisement, he has 400 qualified men for 326 shops and 4,000 employes.

But the public are not in the same position, and that is where the mischief is done. It is useless to appeal to the Pharmaceutical Society. They will politely tell you that a libel on a craft is not actionable and will advise you to do "nothing." I would strongly urge combination and co-operation. The true stumbling-block to all progress in pharmacy is the petty jealousy existing among the individual members of the calling. Sink that feeling and work together for the common good. These advertisements are appearing in the leading daily papers circulating throughout the British Isles, but the effect produced in York, for example, does not matter very much to the chemists of Brighton, and *vice versa*; but both places are served by a local press. Why not let the chemists of the districts concerned combine and issue a joint advertisement in their local paper and answer such misleading statements? It would not cost a great deal and it would show the public that "Boots" is not the only place at which Bland's pills at 9*d.* per gross and cascara tablets at 8½*d.* per 100 can be obtained.

Yours very respectfully,

Harlesden, N.W., April 26.

HEDLEY E. DWELLY.

SIR,—There is no need to call the attention of the trade to the misleading and scurrilous attacks by a limited liability company upon the promoters of the Pharmacy Bill, nor to the opportunity they then take of advertising themselves and blinding the public by their false statements of "purer drugs at more reasonable prices," etc. It is of little use for each chemist to sniff, snort and shake his head when he reads such absurdities, nor is much to be gained by writing scathing letters on the subject to the trade journals and then allowing the matter to drop. What is needed is

co-operation. There has been a lot said about co-operation at one time or another, but nothing definite has been decided. We often hear chemists say to one another, "If chemists would only combine and do away with petty local jealousy!" I think, then, these two facts may then be taken for granted:

1. That there is certainly a crying need for co-operation.
2. That chemists individually recognise that need.

Why not then start co-operation? What would be the gain locally? The much-advertised nostrums could be bought in the lowest markets; drugs could be bought more reasonably, surgical requisites could be obtained at a cheaper rate. As to the general advantages to be gained, one already stares one in the face. Full-page advertisements could be inserted in the dailies answering and exposing the false statements of "Leather & Co." Another advantage would be that the uncalled-for attacks of the Yellow Press upon the honesty of chemists, and probably backed by the advertising financiers of those papers, could similarly be replied to in a full-page statement. And what might the future bring? Chemists would have their own drug-houses and laboratories, the profits being paid back into their own pockets. They would have their own sundries-house, where they could have the 101 items now sold put up for them by their own employés. Could not this be worked thus: That each town or district form a combination among the local chemists; these local combinations send representatives to form a council for a certain number of districts; these again send members to a council representing one-third of the country, and, again, one general council to be formed to sit in London for the country?

This may appear somewhat visionary, but I am certain co-operation in some form or another could be started if only properly taken up; and if it once starts who can tell where it may end? Yours faithfully,

Gillingham, Kent, April 26.

FREDK. A. STOOKE.

[A letter on the co-operation suggestion by "Midland Chemist" is also in type.]

War Office Tenders.

SIR,—Anent the subject of the standardisation of disinfectants and a condition reported to have imposed upon parties tendering for disinfectants in the form of contract recently issued by the War Office, we have felt it our duty to write to the Secretary of the War Office suggesting to that official that there should be imposed upon parties tendering for disinfectants the further obligation of stating specifically whether the disinfectants are really poisonous or non-poisonous, and also whether or not they have any value as oxidising-agents, or any other qualities besides their mere bactericidal property.

Yours faithfully,

THE SANITAS CO., LTD.,

C. T. Kingzett, Managing Director.

Limehouse, E., April 26.

Pharmaceutical Council Election.

SIR,—Your interesting correspondent "Xrayser," writing upon the above subject on April 15, leads one to suppose that there is no discontent among chemists with the present Council. He says, "So far, no *casus belli* has been raised to justify partisanship." With all due deference to so able a writer, I very much disagree. Discontent and even disgust are general. Men in business complain not of legitimate competition, but of the open trading in poisons by unregistered persons. There are hundreds of cases in London. Limited companies are formed and run without any intention of retaining the services of a qualified man. Young men having served their apprenticeship make no secret of their intention to set up business without qualifying, and give any number of instances where the laxity in the administration of the law quite justifies their taking the risk. Coupled with the severity of the two-days' examination, and the accompanying expense with such a poor return for the money so spent, when they get into business and with no protection afforded them, there can be no wonder that we are flooded with unqualified retailers of poisons. This masterly inactivity is the reason why it is felt that new blood is required in the Council. West-end chemists with their snug incomes do not and cannot sympathise with the condition above named as can such men as Messrs. Truman

and Pickering—the London Chemists' Association candidates. Mr. Truman has worked his way to his present affluent position by hard work, and now has plenty of time at his disposal. Mr. Pickering has had a most varied experience. They both know the wants and grievances of their brother-chemists, and have been associated with, and are disciples of, Mr. Glyn-Jones and his active progressive policy. I am well aware that we have good men in such representatives as Messrs. Robinson, Wootton, and others, but I feel sure that the active and independent position that would be taken by Messrs. Truman and Pickering would be an acquisition to the Council. They spend night after night in the lobby of the House of Commons endeavouring to educate members in the truth of our grievances, and are determined to leave nothing undone that will tend to secure us our rights and titles of which we have been so cruelly robbed by blundering lawyers and apathetic Councils. To those chemists who are dissatisfied with the present state of things I say, Vote right, or you will have yourselves to blame. Yours faithfully,

Dalston, N.E., April 25.

J. C. PENTNEY.

"What is Turpentine?"

SIR,—Observing the letter addressed to you by Mr. J. C. MacWalter and your editorial note dealing with this subject, I would venture to point out that "turpentine" in the popular sense cannot be construed merely as meaning oil of turpentine conforming with the B.P. characters and tests, but any kind of spirits of turpentine obtained by the well-understood processes from pine-trees. In that sense, French, Russian, and Swedish turpentine must be regarded as standing precisely on the same footing as American turpentine, and I also venture to point out that you are mistaken in thinking that American turpentine is practically the only kind obtainable in this country; Russian turpentine is imported in very large quantities, and for many purposes is preferable to the American product, although there is a good deal of prejudice against its smell in connection with its use for admixture with paints and varnishes.

Yours faithfully,

C. T. KINGZETT.

Elmstead Knoll, Chislehurst, April 26.

What is Liquozone?

SIR,—In your issue of April 22, p. 617, you publish some comments on "Liquozone" based upon an article which appeared in "Truth," and which, in its inferences, is rather unfair. The article in question seems to throw doubt on our claims that the virtues of "Liquozone" are derived solely from gas, made in large part from the best oxygen-producers. We beg to enclose you the formula of "Liquozone," signed under oath, also a sworn statement from a chemist who has for years had charge of the making of "Liquozone." You will note that all three statements enclosed confirm in every way the statements which we make in regard to our process. It is true that an analysis of "Liquozone" will show a small percentage of the acids mentioned, but a complete analysis made with a knowledge of the process followed would show many other ingredients, all formed, as these acids are, in the course of the process. We do not wish to enter into any argument regarding the virtues of "Liquozone." The virtues of any remedy may be just subject for differences of opinion. Our plan is to supply the first bottle free to anyone who applies for it, and let each user test it at our expense. Those who find it ineffective certainly will not buy. We ask you, therefore, in the interest of fairness, to insert this explanation, and we give you the assurance that we court the fullest investigation of the facts in the "Liquozone" laboratories at Chicago and Paris.

Yours faithfully,

BRITISH LIQUOZONE CO., LTD.

The B.P. Preface.

SIR,—Will you allow me to say that in your report of my note on the preface to the B.P. (p. 187) you did not state what I pointed out with reference to 90-per-cent. spirit? In the preface it is stated that "90-per-cent. spirit is a mixture of 90 volumes of ethyl hydroxide and 10 volumes of water." This evident error is repeated in the text. A slight condensation takes place when spirit and water are mixed, so that more than 10 volumes of water are required to make up 100 volumes. My suggestion that "characters" and "tests" should be in separate paragraphs was made to

facilitate reference. At present it is sometimes difficult to know where "characters" end and "tests" begin.

Yours truly,

Edinburgh, April 26.

W. S. GLASS.

Do Chemists Get All They Might?

SIR,—The second part of Mr. Reid's letter in your issue of April 15 is simply a refusal to see with his own eyes that which is to be seen. I do know Scotch trade. I served my apprenticeship in Scotland, was an assistant there, and passed the Minor in Edinburgh ten years ago. I never saw stock taken during that time, none of the other druggists in the town took stock, and not even in the class I attended in Edinburgh did I meet a man who had ever seen it done. I have recent letters from old friends who during their London experience in good shops have only seen stock taken once in five or six years. The sheep-dip trade I know well, for I served my time with the only druggist (out of six in the town) who at that time kept sheep-dips. Our stock was McDougall's dip, tobacco-juice, and spirit of tar, and Cooper's arsenical dip; but five ironmongers in the town kept the first three articles, leaving us with the enormous monopoly of arsenical dip, which at that time was about a third of our whole trade in sheep-dip. Compare this with the sales of five ironmongers in the town, adding that of seedsmen who came regularly to the market from all the big centres, and I think I have made good my point that druggists do not have anything like the bulk of the sheep-dip trade. It will be admitted, I suppose (even by Mr. Reid), that grocers, oilmen, and drysalers do keep patents and drugs. Very well. Collectively they outnumber druggists quite three to one, so that the united turnover must be considerable, even if their individual sales be as small as the druggist's, which has not yet been proved. In 1901-3 I was offered three good businesses for sale in Scotland. Not one of the owners took stock; not one dealt in patents or household drugs to any great extent, but relied solely on dispensing, and the fact that the doctors had not started to do their own. Farmers whose homes I visit in Scotland have shown me the nitre, soda, castor oil, linseed oil, patent medicines, foods, and house-cleaning materials which the grocers had supplied them with, and we compared prices with those in vogue in England. But, bless you, they don't go purposely to the druggist and tell him about it. One firm at least in Scotland has built up a big business during the past twenty years by packing drugs for grocers to sell, such as seidlitz-powders, salts, quinine, saline, seltzogenes, senna, pills, soda, borax, and teething-powders. I will leave reasonable men to say whether or not I have proved this point. As to Boots in Scotland, Mr. Reid comforts himself with the thought that Boot may find an eye-opener in Scotland. What I said was perfectly clear: "Fifty Boots' shops in Scotland would demonstrate the possibilities of the drug-trade." Many men in England have built up splendid businesses of 5,000*l.* to 8,000*l.* a year turnover alongside of Boots' shops, but not on Scotch methods—or old English methods either, for that matter.

A SCOT WHOSE HOUSE IS IN ORDER. (197/69.)

April 17.

Legal Queries.

I. D. R. (201/73).—COPYRIGHTING.—You will find all information about this in our *Diary*, p. 240.

G. A. (198/72).—See recent replies and the note on Assistants' Engagements in the *C. & D. Diary*.

Emulsion (200/48).—THE APPRENTICESHIP AGREEMENT is not invalid because it is not stamped. If produced in court the judge will order it to be stamped, which will be done by the Revenue Authorities on payment of a fine. A master may not dismiss an indentured apprentice without the consent of the other party to the agreement, in your case the boy's father, and he is entitled to recover from you. You appear not to realise that your contract was to teach the boy the business in the course of four years, and during that time you were to be *in loco parentis*, therefore responsible for the boy's conduct. On the first point you have failed to complete your contract, and you repudiate the other by endeavouring to throw responsibility on the father, with whom your best course now is to come to an amicable arrangement.

Stamps (193/65).—Your handbill, as altered, does not make any of the preparations liable to medicine-stamp duty.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

Verrax (201/20).—(1) You cannot be wrong in using any standard oxidising and bactericidal agent for disinfecting razors. (2) The best qualities of black varnish—Berlin or Brunswick black—are suitable for numbering shaving mugs.

Junior (201/36).—There is no book published on the manufacture of rat virus.

G. G. (200/39).—The fluid form of linimentum potassii iodidi cum sapone dispensed at a Dublin pharmacy was probably made of soft soap, as suggested by Mr. A. L. Doran, of Bray, and more recently modified by Mr. Jones, of Coventry. See *C. & D.*, August 13, 1904, p. 297.

W. C. (196/16).—LITHIUM SALICYLATE TABLETS.—It is difficult to make this salt into tablets, for the reason that with too much pressure the tablet is difficult to dissolve and with too little the tablets deliquesce. It is on this account that the effervescent form of tablets is preferred for salicylate of lithium.

A. B. T. (196/44).—DYEING BILLIARD BALLS.—The method was given in the *C. & D.*, November 21, 1903, p. 854, and is also in "Pharmaceutical Formulas."

B. & G. (196/8).—Your trouble in connection with SHIRING LABELS ON TINS illustrates the disadvantages of adding non-drying ingredients to the paste with the idea of making the labels adhere on a metal surface. Magnesium chloride, honey, glycerin, calcium chloride, and butter of antimony are all used for this purpose, but some of them produce, after a time, a rust which stains the label. Honey is the least objectionable addition, and the paste should be boiled for at least two hours. Rye-flour is considered to make a more adhesive product than wheat-flour.

W. E. (198/70).—CARBOY COLOURS.—The following solutions are permanent, but must be made with distilled water:

Red—

Iodine	...	...	...	2 dr.
Hydrochloric acid	...	...	...	1 oz.
Water	...	...	...	2 gals. or q.s.

Dilute till of the proper shade.

Green—

Nickel sulphate	...	...	...	$\frac{1}{2}$ lb.
Sulphuric acid	...	...	...	4 oz.
Water	...	...	...	2 gals. or q.s.

T. T. (197/52).—FRENCH POLISH.

Shellac	...	...	...	1 lb.
Benzoin	...	...	...	$\frac{1}{2}$ oz.
Sandarac	...	...	...	1 oz.
Spirit	...	...	...	4 pints

Dissolve and strain.

W. B. (190/63).—REMOVING INK WRITING.—There is not much difficulty in effecting this with chloride of lime and acetic acid, but as it is almost impossible to wash out the residual chemicals, the writing being on the title page of the book, the after effects are uncertain. If you try this method apply the chemicals on small pads of blotting-paper and wash with a sponge wetted with clean water.

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.), will be esteemed.

201/52. Who are the agents for Corionine?

201/27. Who supplies Martin's liquid glue in bulk?

202/22. Where can Hottentot oil and Swedish oil (for neuralgia and rheumatism) be obtained?

201/62. Where can extract of beef "Bolero" be obtained?

202/62. Name and address of producer of penny photographs of cricketers and footballers which are now being sold in toy-shops.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., April 27.

THERE are no features of importance to note in drugs and chemicals, as the holiday feeling has been apparent for several days this week. Refined Japanese camphor is firmly held and in fair demand, holders asking a further penny advance. Some moderate arrivals of dementholised peppermint oil and menthol have taken place *via* the Continent, but so far there is no material alteration in prices. Senega is firm and temporarily scarce on the spot. Cascara sagrada and ipecacuanha are quiet and unaltered. Dragon's blood is now in good supply owing to arrivals. Opium is steady here and firm in Smyrna. Quinine is a dead letter, and the Norwegian cod-liver oil market continues weak. Among chemicals ordinary brands of sulphate of copper are easier, and the falling tendency of benzols is again noticeable. The changes in fixed oils include a substantial advance in linseed, cottonseed, and turpentine oils. Nut oil is firmly held. The only auctions of importance this week have been varnish gums. The following are the principal alterations of the week:

Higher	Firmer	Easier	Lower
Camphor (ref. Jap.) Oil, coconut Oil, cotton Turpentine	Acid, earbolic Oil, linseed Oil, peppermint (H. G. H.) Menthol	Benzols Golden seal Shellac	Copper sulphate Oil, cod-liver

Cablegrams.

HAMBURG, April 27.—An arrival of 228 cases of menthol and dementholised peppermint oil has taken place; prices are unaltered. Golden seal (hydrastis) and senega are lower.

BERGEN, April 19.—The total catch of cod for the whole of Norway, from the beginning of the season to April 17, now amounts to 31,404,000, against 31,941,000 for the corresponding week of 1904. The yield of steam-refined oil is now 23,336 barrels, against 9,610 barrels. The fishing at Finmarken continues favourable, and the market for finest Lofoten non-congealing oil is weak at 76s. per barrel, f.o.b.

BERGEN, April 26.—The total catch of cod for the whole of Norway since the beginning of the season amounts to 33,502,000 against 36,695,000 for the corresponding week of 1904. The yield of steam-refined oil is now 25,262 barrels against 10,303 barrels at the same time of last year. Finmarken has produced poor results since my last cablegram, owing to bad weather. The market for finest medicinal oil is quiet at 75s. per barrel, f.o.b.

NEW YORK, April 20.—Business is quiet. Opium remains weak at \$2.90 per lb. for druggists by single cases. Menthol is unsettled and easier at \$1.95 per lb. Cod-liver oil is dull and lower at \$30.00 per barrel for prime Norwegian brands. Citronella oil is advancing, 42c. per lb. being required for Ceylon. Peppermint oil is neglected, and quotations are easier at \$2.90 per lb. for bulk. Jalap is also easier at 8c. per lb. for new crop.

NEW YORK, April 27.—The market here is dull. Opium is quiet and unaltered at \$2.90 per lb. for druggists' in single cases. Norwegian cod-liver oil is weak and lower at \$28.00 per barrel, and menthol is now obtainable at \$1.90 per lb. Peppermint oil is being depressed, and

\$2.80 will now buy Western in bulk. Mexican sarsaparilla is easy at 8½c. per lb., and a further reduction to 7½c. per lb. has been made in refined camphor in first-hands. The brisk demand for sodium biomide has resulted in an advance to 20c. per lb. Ceylon citronella is strong at 42c. per lb.

Arrivals.

The following drugs, chemicals, etc., have arrived at the principal ports of the United Kingdom from April 19 to 26, inclusive: Acid, acetic, 100 cbs.; acid, citric (@ Bordeaux), 20; acid, tartaric (@ Rotterdam), 53; argol (@ Leghorn), 56; arsenic (@ Portugal), 150; bromine (@ Hamburg), 160 es.; Calabar beans, 15; camphor (@ Havre), 378 cs.; cardamoms, 199; cascara sagrada (@ San Francisco), 90; chamomiles (@ Ghent), 53; coca-leaves (@ Colombo), 13; coriander (@ Bombay), 60; cream of tartar, 96; dragon's blood (@ Singapore), 9; drugs (@ Hamburg), 19; ergot (@ Hamburg), 11; galls (@ Marseilles), 100; gentian, 78; ginger, (@ Bombay) 163 bgs. 53 pkgs., (@ W.C. Africa) 2,509, (@ Jamaica) 318, (@ Cochin) 330; gum, unenumerated (@ Bombay), 141 bgs. 461 es. 41 pkgs.; honey (@ Halifax) 62 pkgs., (@ Jamaica) 9; kino (@ Cochin), 14; kola (@ W.C. Africa), 5; liquorice, 118 bls.; menthol, (@ Hamburg) 20, (@ Havre) 20; nux vomica, (@ Bombay) 67, (@ Tellicherry) 248, (@ Havre) 150; oil, easter (@ Marseilles), 22 bls. 30 es.; oil, cod-liver, (@ Bergen) 75, (@ Drontheim) 20, (@ Christiania) 10; oil, eucalyptus (@ Hamburg), 58; oil, peppermint dement. (@ Havre), 100 es.; oilbalm (@ Havre), 220 es.; opium, 21, (@ Salonica) 31; pot. iodid. (@ Yokohama), 5 es.; quicksilver (@ Seville), 5,000; "roots," etc. (@ New York), 239; senna (@ Alexandria), 55; tartar (@ Bordeaux), 162; wax, bees' (@ Jamaica) 10, (@ Bombay) 8; wax, Carnauba, 185; wine-lees, (@ Bari) 361, (@ Messina) 483.

Liverpool Drug-market.

Liverpool, April 26.

Owing to the holidays very little business is passing.

CASTOR OIL.—A large business has been done in good seconds Calcutta on the spot at advancing rates. Stocks being very much reduced, price is in sellers' favour at 2½d. to 2¾d. First-pressure French is steady at 2½d. to 2½½d. per lb., and for shipment, 22½. 10s. to 23½. per ton is asked.

HONEY (CHILIAN).—The sales include 15 barrels Pile 1 at 26s. 6d. per cwt.

WAX (CARNAUBA).—Sales of yellow have been made at 198s. to 201s. per cwt.

WAX (BEES').—Ten cases of Peruvian have been sold at 7½. 13s. 9d. to 7½. 17s. 6d., and seven packages Sierra Leone at 7½. per cwt.

KOLA NUTS.—Seventeen bags dry African have been sold at 2½d. per lb.

TURPENTINE is very firm at 44s. 3d. to 44s. 6d. per cwt.

Heavy Chemicals.

Since last writing very little business of any description has been done in the heavy-chemical market owing to the holidays, and matters have hardly yet settled down to a normal tone again. An increase in export demand at an early date seems probable, and as regards values they are mostly well maintained, and likely to continue so. Alkali-products stand fairly well, and sulphate of ammonia keeps on the quiet side.

RECOVERED SULPHUR continues to maintain a firm tone at 5½. 10s. to 5½. 15s. per ton, free on rails, in bags, according to quantity and delivery, etc.

MAGNESIUM SALTS continue to move steadily at unaltered rates. Sulphate (Epsoms) 57s. 6d. to 62s. 6d. per ton, chloride 65s. to 67s. 6d. per ton, and carbonate 37s. 6d. to 40s. per cwt.

ZINC SALTS are in good average demand, and prices are firm. Zinc sulphate crystals 6½. to 6½. 5s. per ton, and zinc chloride solution, 100° Tw., 6½. 5s. to 6½. 10s. per ton.

GREEN COPPERAS is without change, and demand for both prompt and forward is very fair. Best Lancashire makes 37s. 6d. to 40s. per ton, f.o.b. Liverpool, and Welsh 11s. to 12s. per ton in bulk, free on rails.

SULPHOCYANIDES are dull, but late quotations are nominally unchanged. Potassium 7½d. to 7½d. per lb., ammonium, 95 per cent., 6½d. to 6½d. per lb., and barium, 95 per cent., 3½d. to 3½d. per lb.

LEAD COMPOUNDS continue in steady request. White acetate of lead 24½. 15s., brown acetate 17½. 10s., and nitrate 24½. per ton, Glasgow, all less 2½ per cent.

German Drug-market.

Hamburg, April 25.

Business is very quiet owing to the holidays, and our drug-market shows few changes since last Tuesday.

ANTIMONY is firmer at 39½m. per 100 kilos.

CAMPHOR.—Refined is again very firm after the late reduction to 675m. per 100 kilos, the factories having raised

their price last week to 725m. per 100 kilos.; second-hand holders ask 715m.

CARNAUBA WAX.—About 3,000 bags arrived here last week. Prime yellow is quoted 400m. per 100 kilos.

CASCARA SAGRADA is steady on the spot at 66m. per 100 kilos. CONDURANGO is easier at 53m. per 100 kilos.

ERGOT is quiet at 295m. to 290m. per 100 kilos.

GOLDEN SEAL is tending lower; Canadian on the spot is quoted 15m., and for shipment 14½m. per kilo. is quoted.

JAPANESE WAX is easier at 77m. per 100 kilos.

LYCOPodium is also weaker at 765m. per 100 kilos.

MENTHOL is quiet at 14½m. per kilo.

SENEGA is neglected at 6½m. per kilo.

SUGAR OF MILK is steady at 120m. per 100 kilos.

OILS (FIXED).—Castor is quiet, first pressing in barrels offering at 46m. per 100 kilos. Chinese wood oil is firm on the spot at 55m. per 100 kilos. Linsced and cotton oil are steadily advancing; palm kernel and rape are unchanged.

American Drug-market.

New York, April 11.

Business is quiet, and the market excites little interest in spite of the declines in several important articles.

ALOES is quiet but steady, with 3¼c. asked for Curaçao and 10½c. for Cape.

BUCHU LEAVES.—Prime green are firm at 17c.

BALSAM COCAIBA.—Central American is jobbing at 31c.

CAMPHOR.—Domestic refiners have reduced quotations to 76c. in barrels.

COD-LIVER OIL is dull and quotations for prime Norwegian brands are nominal at \$32.00; Newfoundland pure oil is quoted at \$1.00 per gal.

JALAP is easier, and new crop could be bought at 8c. For prime old up to 10c. is asked.

MENTHOL is irregular and unsettled owing to active competition. Sales are reported down to \$1.98, but the general quotation is \$2.05 to \$2.25.

OPUM is unsettled owing to competition and dull trade. Quotations have declined to \$2.90.

PEPPERMINT OIL is neglected, and quotations of \$3.10 for bulk and \$3.40 for HGH are nominal.

QUININE is quiet at the decline to 21c. Second-hands offer at the same figure for German and 20c. for Java.

SARSAPARILLA.—Mexican is selling in a small way at 8¾c.

ACETANILIDE is firm, and in good demand at from 10d. to 10½d. per lb.

ACID, CITRIC.—One of the English makers quotes 1s. 2½d., but in second-hands 1s. 2d. would buy; foreign is quoted 1s. 1¾d.

ACID, TARTARIC.—Quiet at 11½d. per lb. for English and 10½d. for foreign.

ACONITE.—German *Napellus* is in fair inquiry at 37s. per cwt., c.i.f.

AGAR-AGAR.—Prices for arrival are firm at 1s. 2½d. per lb., c.i.f., and on the spot, fair to good strips are quoted 1s. 2d. to 1s. 3d. per lb.

BENZOLS are easier at from 8½d. to 9d. per gallon for 90 per cent. and 7½d. to 7d. for 50 per cent.

CAMPHOR.—A fair amount of business has been done in Japanese refined tablets during the last few days, and holders are firm at from 2s. 11d. to 3s. per lb. for 1-oz. size. English bells are quoted 3s. 3d. to 3s. 4d.

CASCARA SAGRADA.—Quiet at last week's prices. The long overdue sailer *Altair* arrived in the Thames this morning. It is estimated that her cargo is well over 100 tons.

CHAMOMILES in steady demand, fine Belgian offering at from 80s. to 90s., and old crop at from 56s. to 65s., c.i.f.

CINCHONA.—The auction to be held at Amsterdam on May 4 will consist of 7,830 bales and 430 cases, weighing 766,049 kilos., and containing 37,479 kilos. of quinine sulphate. The manufacturing-bark contains an average of 5.40 per cent., against 5.69 per cent. for the March auction, and an average of 5.21 per cent. for the ten auctions held in Amsterdam in 1904.

COCAINE.—Crude is steady at about 340m. per kilo. A slightly better demand is reported for hydrochloride, a few new contracts having been made at the official prices of 13s. 9d. per oz. as a basis.

COPPER SULPHATE.—Dealers in ordinary brands of sulphate have reduced their price by 5s. per ton, and now quote 20l. 15s. Liverpool make is unaltered at 21l. 15s.

CREAM OF TARTAR.—Quiet at 81s. 6d. to 82s. for 98 per cent. and 82s. to 82s. 6d. for 99 per cent. to 100 per cent. powder.

DRAGON'S-BLOOD.—Some 25 cases have come to hand during the past fortnight, so that the prices paid at the last auctions are not likely to be repeated.

GAMBIER.—Small sales of cubes have been made at 29s. to 29s. 6d. per cwt. spot.

GOLDEN SEAL.—A little is obtainable at 7s. net, spot.

MENTHOL.—There has been some inquiry on behalf of parties endeavouring to cover contracts shortly due, and this appears to have induced a firmer feeling to-day. It is said 6s. 3d. spot has been refused for Kobayashi, 6s. 4½d. to 6s. 6d. being wanted. Yazawa is obtainable at 6s. 3d. spot.

OIL, CAJUPUT.—Good green Singapore is quoted 3s. 6d. per bottle. Several arrivals have taken place this week.

OIL, CASTOR.—Calcutta seconds is quoted 2½d. per lb. spot.

OIL, COD-LIVER.—Buyers are still holding off in the expectation of lower prices, which are nominal at 80s. per barrel, c.i.f., but offers at less would be submitted.

The following advice from our Bergen correspondent, dated April 17, was received too late for our issue of last week: The fishing is now closed at Lofoten, and no further reports of interest are expected from that source. Last week's catch at Finnmarken was rather poor, mostly owing to bad weather, and on the whole the catch was far behind that of last year, which gave nearly seven million cod against only 1,210,000 this year. To-day reports are to the effect that the Finnmarken fisheries are improving, and news has come to hand from several places in the west of Finnmarken that the catch is good and the liver fat. The result of the catch up to date is as follows:

	April 17, 1905.	April 20, 1904.	April 22, 1903.
Catch	31,404,000	31,941,000	30,209,000
Cod-liver oil (brls.)	23,336	9,310	1,820
Livers for raw cod oil (hect.)	5,895	5,288	4,423

The great quantity of oil produced this year is owing to the fact that the liver throughout the season has continued remarkably fat. Usually at this time of the year the cod has only a lean liver, with a small percentage of oil, but this year reports state that the fish are still rendering a large and fat liver, as was the case at the beginning of the season.

Writing again on April 24 our Bergen correspondent states that "Owing to the Easter holidays, complete statistics cannot be given to-day. In Lofoten, last week's catch was only three hundred thousand cod, with a yield of about 200 barrels steam-refined cod-liver oil, and on the whole the increase of the catch outside Finnmarken will certainly not be much more than half a million of cod. In Finnmarken, from where reports are wanting, fishing has partly been hindered by stormy weather and the holidays, so that the result of the week may perhaps be a moderate one. Still, the prospects are considered very fair, and what is more important—the livers are very fat and of fine quality. The market continues very quiet, with a continued falling tendency. Finest Lofoten non-freezing cod-liver oil can hardly be quoted above 75s. per barrel, f.o.b. Bergen, but many holders are unwilling to accept such a price, having a conviction that the consumption will be animated by this year's extraordinarily fine oil and low prices. The export from Bergen up to date amounts to 2,217 barrels, against 1,333 barrels at the corresponding date of last year, and for the whole country the total export up to date may be estimated at from 5,000 to 6,000 barrels."

OIL, PEPPERMINT.—Several arrivals of Japanese demethylised oil, amounting to 100 cases, have taken place from the Continent. Spot holders ask 4s. for Kobayashi, and for American HGH 15s. 3d. has been paid in a retail way, being firmer. Pure Wayne County is quoted 13s. 6d. spot, 13s. 3d. to come forward, and for *Todd's* 14s. 6d., c.i.f., is quoted. Letter advices from New York state that efforts are being made to bring down the price further, and \$2.90 will buy Western.

OILS, FIXED.—The chief alteration has been an advance in *Linsced* oil, which is now quoted 19s. 3d. to 19s. 6d. in pipes on the spot and 20s. in barrels. *Cottonseed* oil is also dearer at from 17s. 6d. to 19s. per cwt. for refined on the spot as to make and package. Ceylon *Cocoonut* is offered at 29s. and Cochin 34s. 9d., spot. *Nut* oil is firm at 36s. per cwt. for good yellow. *Turpentine* has had a substantial advance to 44s. 3d. for American on the spot. *Petroleum* oil is dull at 4½d. per gallon for Russian, 6½d. to 6¾d. for American water-white, and 5½d. for ordinary.

Petroleum spirit is 7d. to 8d. for ordinary and 9d. to 1s. for deodorised.

OPIMUM.—The London market is steady with a few small sales at last week's prices. Persian is quoted 15s. 6d. to 16s., according to quality.

SMYRNA, April 14.—The sales this week amount to six cases. Notwithstanding the small business done, our holders maintain a firm attitude, and show no signs of weakness. As soon as consumers come on our market again it is expected that prices will advance. The arrivals in Smyrna to date amount to 4,471 cases, against 1,781 at same period last year.

CONSTANTINOPLE, April 20.—The weather is at present very favourable to spring-sown plants, but the percentage of same as compared with other years is very small. Salonica reports a very unsatisfactory condition of the crop, and a yield of over 750 cases appears very unlikely. Taken all round we doubt if Turkey, Salonica included, will produce over four to five thousand cases this year. A crop of this size will not in all probability seriously affect prices in view of heavy stocks. At the same time, when it becomes more generally realised that Salonica will only be one quarter of last year's, and Asia Minor barely one-half, a rise of 3d. to 6d. is probable. The sales amount to four cases Zillies at the equivalent of 7s. 7d. per lb., f.o.b. Market closes steady.

SMYRNA, April 21.—The sales amount only to two cases rich Yerli for America at 8s. 6d. per lb., f.o.b. The Interior complains of drought and dry hot winds, which further strengthens the optimistic views of holders, and so long as they are not pressed for money by their bankers and interior clients they will not sell a single case at present prices. The general impression is that high prices will be paid by dealers for new crop later on, so the old will also command higher rates. The arrivals in Smyrna to date amount to 4,494 cases, against 1,783 cases at same period last year.

POTASH CYANIDE is maintained at 8½d. to 8¼d. per lb. for Beckton make.

QUININE.—A very quiet feeling continues, with small sales from second hands at 10d. per oz. for good German sulphate.

SARSAPARILLA.—Lima-Jamaica is scarce, and wanted on the spot; second-hand holders ask 1s. per lb. Several shipments near at hand will be offered at the next auctions; for genuine grey Jamaica 1s. 3d. to 1s. 4d. is quoted from second-hands.

SENEGA.—There is practically nothing to be had on the spot at the moment, consequently holders are very firm at 2s. 9d. per lb. net or 2s. 9d. c.i.f. There has been a good inquiry. Advices from the West are firm, with the intimation that current values are likely to be maintained.

SHELLAC.—The spot prices are unaltered with a steady trade, ordinary to superior TN orange being quoted at from 144s. to 147s. 6d. per cwt. Some small sales of free AC Garnet have been made at 147s. 6d., and more or less blocky at from 137s. 6d. to 142s. 6d. Futures are nominal and easier, June delivery of TN being quoted 143s.

SOY is very quiet at from 1s. 2d. to 1s. 7d. per gal., according to quality.

SPICES.—No public sales have been held this week. Privately sales of Calicut *Ginger* have been made at 28s., c.i.f., for April-May shipment to Continent, and in Liverpool sales of Sierra Leone have been sold at 19s. 3d. per cwt. in transit. *Pepper* is quiet, with sellers of Singapore on the spot at 5½d. and March-May at 5½d. Fair Singapore *White* is quoted 8½d. and Penang 7½d. per lb. spot. Zanzibar *Cloves* have been quiet, with spot sales at 4½d. full prompt. Previous to the holidays small sales of June-August were made at 4½d., and August-October at 4¾d. per lb., but there were subsequently buyers at these figures, the tendency being firmer.

TAMARINDS.—Fair Barbados are quoted 13s. 6d. per cwt., duty paid.

TURMERIC.—Good Madras finger has been sold privately at 18s. per cwt., and fair 16s. 6d. to 17s.

Quicksilver-output in 1904.

The world's production of quicksilver last year was estimated at 100,374 flasks, or 3,391 metric tons, being 355 metric tons more than the figures for 1903. Of the above quantity last year the United States produced 1,480 m. tons (1903, 1,288 m. tons), Austria 536 m. tons (1903, 520 m. tons), Spain 1,020 m. tons (1903, 914 m. tons), and Italy 355 m. tons (1903, 314 m. tons). The only countries of any importance not included above are Russia and Mexico, figures for which have not been

received. In 1903 Mexico reported 190 and Russia 362 metric tons. Assuming that their output was the same in 1904, and making an allowance for the smaller producers, such as Japan and Germany, a total for the year of 3,980 metric tons, or 134,460 flasks, of quicksilver would be arrived at.

Crude Cinchona-alkaloids at Amsterdam.

At the Amsterdam bark auctions on March 30 three cases catalogued as "Bendo" Cinchona alkaloids, weighing 159 kilograms net, were offered. The contents, according to report, appeared to be grey brown in colour, partly run together, and when broken disclosed white specks like chalk. The alkaloids had a strong petroleum odour, and the analysis gave 19.5 per cent. water, 4.4 per cent. ash, 3.5 per cent. insoluble impurities in lye, and 69.2 per cent. alkaloids. The alkaloidal contents consisted of 20.3 per cent. quinine, 16.5 per cent. cinchonidine, 14.3 per cent. cinchonine, and 18.1 per cent. amorphous alkaloids. So that the whole contained 20.3 per cent. of quinine, out of which 27.4 per cent. quinine sulphate could be made. The raw alkaloids fetched 1.82 per ½ kilogram, i.e., according to above analysis 6.66 cents. per unit. It looks like an effort to save freight on bark, remarks Mr. P. Van der Wielen in the "Indian Mercury," but if so the attempt has not been a brilliant success. It was a very impure quinine, and better might have been got with inferior bark to that used, which was probably mostly *Succirubra* mixed with some *Ledgeriana* or hybrid. It cannot be called a conclusive experiment.

Otto of Rose.

Our special correspondent in Bulgaria, under date of April 20, writes the following regarding Bulgarian otto and the coming rose crop: "Some three to four weeks ago there was quite an excitement in the rose-market at Kezanlık. The market, which had been dormant for three to four months in succession, suddenly assumed an active aspect. It soon became evident that this apparent activity was only a clever move on the part of holders of old stock, and due to the persistent rumours that the prospects of the coming crop were nearly half-ruined. Last year's crop being a large one (considerably above the average), much of the otto remained unsold. It is estimated that the old stock remaining in the Bulgarian market is considerably over 30,000 oz.—half of it being held by dealers and jobbers and the balance by small growers. With little exception all this large stock is of poor quality, and in order to dispose of it the owners resorted to the old practice of exciting the consuming markets by spreading broadcast alarming statements regarding the coming crop. It was even stated that the rose bushes were damaged by the long and severe winter to the extent of 50 per cent. It soon turned out, however, that this was only a ruse. True, this winter has been one of the longest and severest since the Russo-Turkish war in 1877; but at the same time the snowfall was also the heaviest, and, thanks to it, the rose bushes were well protected by the heavy mantle of snow from the low temperature, and only those plantations suffered that were exposed to the winter blasts. It is stated by trustworthy authorities who have personally visited all the main localities of the rose district, that the damage done by the winter cold is only from 15 to 25 per cent. This is nothing unusual.

"The spring is very backward and it is yet too early to judge definitely as to the prospects of the coming crop. But if the present propitious spring weather continues long, most of the damage done by the winter cold will be retrieved. From the present aspects of the roses an average crop is assured, and favourable weather during the budding season, and above all during the harvesting season, will probably make it considerably above the average. This has once again caused a stagnant and dormant condition in the native market, and the question now discussed is, how far the alarming reports will help the holders of sophisticated otto to unload it on the consuming markets. It is a 'drug' on the market here, but at the same time an eye-opener for those inclined to sophisticate their otto."

THE DRUG-TRADE and its allies in the United States comprise the following numbers of persons in the occupations specified: Chemists, assayers, metallurgists, 8,887; dentists, 29,683; merchants and dealers (retail) in drugs and medicines, 57,346; physicians and surgeons, 140,415; oil-well and oil-works employes, 24,626; other chemical-workers, 14,814; bottlers and soda-water makers, etc., 10,546; broom and brush makers, 10,222; candle, soap, and tallow makers, 4,022; and rubber-factory operatives, 21,866.

The only product of West Yunnan (China) capable of export under present conditions is opium. But the passage of this drug across the frontier is absolutely prohibited. So long as this prohibition is maintained the trade is at a hopeless disadvantage, says the British Consul at Teng Yueh, as compared with the trade which follows other routes to Yunnan. Its removal is now under consideration.

Oil of Lemon:

A New Indirect Method of Estimating the Aldehydes Therein.

By Dr. E. BERTÉ.

(Translated from the original in Italian.)

A NUMBER of chemists have for some time turned their attention to the question of finding a reliable and practical method for the quantitative determination of the aldehydes in essence of lemon, but among all the processes published during the last decade none has yet been found to meet general approval. On this topic a somewhat lively discussion has been carried on in the columns of THE CHEMIST AND DRUGGIST for some time, referring to more or less valuable chemical processes and to the real percentage of aldehydes in oil of lemon. From that discussion it seems that, according to some, the aldehydes in the oil should amount in quantity to $3\frac{1}{2}$ per cent. maximum, but never to 7 per cent., as was commonly found in the past.

Not being desirous of returning to what was published in THE CHEMIST AND DRUGGIST in August, September, and October, 1903, respecting which I then expressed my conviction, I have the pleasure to describe two most recent processes for determining aldehydes, one being the bisulphite process of Messrs. Kremers and Braudel—similar to the Schimmel process for oil of cinnamon and to that which was published by Soldaini and myself. The other is that of Sadtler, based on the known observation of Tiemann—that by agitating an aqueous solution of neutral sodium sulphite along with citral, citral dihydrodisulphonate is formed, liberating caustic soda, from which, by means of titration with seminormal hydrochloric acid, the percentage of citral is obtained. From his determinations Sadtler comes to the conclusion that oil of lemon contains 5.26 per cent. of citral.

Besides the objections offered by Schimmel to the Sadtler method, I wish to observe that Tiemann, in his important work "Bericht d. Deut. Ges." 32, 1899, 412, has found that citronellal differs from citral, in that it shows no reaction with aqueous solution of sodium sulphite and bicarbonate, and he takes advantage of this property to separate the citral from the citronellal and from the methylheptenone in a mixture of such products. The quantity (5.26 per cent.) obtained by Sadtler would therefore indicate the quantity of citral existing in the oil of lemon, but never the total quantity of aldehydes that constitute the oil of lemon itself.

NEW PROCESS FOR ESTIMATING ALDEHYDES IN LEMON OIL.

While I still retain confidence in the methods of analysing aldehydes according to the potassium-bisulphite process submitted by Soldaini and myself (*C. & D.*, September 1903), I have turned my attention to a new method for determining aldehydes by recovering them in an indirect way by the various polariscopic deviations obtained from an oil taken *talé quale*, and from the same when it is subjected to the action of one of the common aldehydic reagents. The new process is based on the principle that if an oil deviates α , then if deprived completely of its aldehydic principle it should deviate γ . From the two polariscopic observations made under the same conditions the aldehydic content would be indirectly found. The *modus operandi* is as follows:

To 10 c.c. of the oil add 50 c.c. of a saturated solution of potassium bisulphite in an Erlenmeyer flask, capacity about 250 c.c. Close it with a stopper in which is inserted a glass tube about 40 to 45 cm. long. Shake the mixture until emulsified, and heat to boiling at 5 mm. pressure for ten minutes, agitating frequently and taking care not to over-heat it. Then allow it to cool completely, after which heat again for another five minutes, agitating it vigorously during the whole operation. Allow it to cool to the temperature of the surrounding air. The mass should then be put quickly into a funnel of the capacity of about 100 c.c., with a tap, and some time afterwards the floating stratum of oil is to be separated from the underlying solution of bisulphite in which the combined aldehydes are found. The terpene is to be washed twice with a little distilled water and filtered along with a little anhydrous sodium sulphate. When it is quite clear examine it with the polariscopes.

The difference between the deviations of the essence and of the terpene taken (of course under the same conditions of

temperature) will give indirectly the quantity of aldehydes that the oil contains according to the following formula:

$$c = \frac{100(a - \alpha)}{A}$$

in which α represents the rotation of the original essence, A the rotation of the essence liberated from the aldehyde, and c the percentage of aldehydes.

Experiments have been made with genuine oil, with others knowingly adulterated, and with some of known composition—i.e., mixtures of lemon terpene of ascertained purity, to which was added various quantities of lemongrass citral whose rotary power was known.

To be able to rely on the method it was necessary, above all, to find out if the action of the common aldehydic reagents and of heat modify the rotary power of the terpene. For this purpose I subjected some terpene to the prolonged action of a saturated solution of potassium bisulphite heated to boiling, and under the conditions above described, and no matter how long the operation was continued, the terpene preserved unaltered the properties it possessed at the beginning, with the following results:

Rotary power $66^{\circ} 0'$ at 20°C .
Specific gravity 0.85190 at 15°C .

I give the results obtained with genuine oil, which I procured through the courtesy of some makers, and from these results it can be seen how exceptional it must be to be able to find oil with 7.40 per cent. total aldehydes.

TABLE I.—PURE OIL OF LEMON.

No.	Fractionated Distillation according to Soldaini and Berté	Sp. Gr. at 15°C .	Rotation of the Oil after Treatment with Potassium Bisulphite	Differences between the Rotations observed	Total Citral or Aldehydes
1	Rotation—At 20°C . Direct $+57^{\circ} 30'$... Distilled $+58^{\circ} 00'$... Residue $+56^{\circ} 10'$...	0.8589	$+61^{\circ} 00'$	$+3^{\circ} 30'$	percent. gr. 7.14
2	Direct $+61^{\circ} 15'$... Distilled $+62^{\circ} 00'$... Residue $+60^{\circ} 40'$...	0.8576	$+61^{\circ} 15'$	$+4^{\circ} 00'$	gr. 7.20
3	Direct $+63^{\circ} 15'$... Distilled $+63^{\circ} 50'$... Residue $+62^{\circ} 00'$...	0.8579	$+61^{\circ} 00'$	$+3^{\circ} 45'$	gr. 7.05
4	Direct $+61^{\circ} 40'$... Distilled $+62^{\circ} 20'$... Residue $+60^{\circ} 10'$...	0.8577	$+65^{\circ} 20'$	$+3^{\circ} 40'$	gr. 6.85
5	Direct $+59^{\circ} 45'$... Distilled $+60^{\circ} 35'$... Residue $+58^{\circ} 15'$...	0.8587	$+62^{\circ} 15'$	$+3^{\circ} 35'$	gr. 6.90
6	Direct $+63^{\circ} 10'$... Distilled $+63^{\circ} 45'$... Residue $+62^{\circ} 03'$...	0.8581	$+67^{\circ} 20'$	$+4^{\circ} 10'$	gr. 7.18
7	Direct $+60^{\circ} 35'$... Distilled $+61^{\circ} 20'$... Residue $+59^{\circ} 20'$...	0.8582	$+64^{\circ} 40'$	$+4^{\circ} 05'$	gr. 7.40

In the above table and in the one following, besides the other results, I have thought well to give the data furnished from the fractionated distillation according to what was published in my last note ("Boll. Chim. Far." February 11, 1904), following the method of Soldaini and Berté, which is not always of itself sufficient to yield a correct indication of the genuineness of an oil, seeing that it is possible to come across oils containing from 30 to 40 per cent. of terpene and still conforming with the results expected from distillation.

In the second table I show the results obtained with oil of lemon suitably sophisticated by the addition of various quantities of genuine terpene, and quantities of the same terpene mixed with common oil in the required proportion to restore the specific gravity. The oils employed

concentrate of terpene from 40 to 50 per cent. of aldehydes could be found, as stated by Mr. E. J. Parry (*C. & D.*, August 1903) and by Messrs Burgess and Child (Schimmel's "Bulletin," April 1902). I have succeeded both by following the polariscopic method and by the old potassium-

TABLE II.—ADULTERATED OIL OF LEMON.

No.	Fractionated Distillation by the Soldaini and Berté Method	Sp. Gr. at 15° C.	Rotation of the Oil after Treatment with Potassium Bisulphite	Differences between the Direct Rotations and the Terpene after Treatment with Potassium Bisulphite	Total Citral or Aldehyde Found	Remarks
Rotation—At 20° C.						
1	Direct +62° 10'	0.8576	+65° 90'	+3° 80'	6.54 p.c.	Oil of lemon <i>plus</i> 10 per cent. of terpene
	Distilled +62° 10'					
	Residue +62° 00'					
2	Direct +63° 35'	0.8567	+67° 00'	+3° 65'	6.10 "	Oil of lemon <i>plus</i> 15 per cent. of terpene
	Distilled +63° 25'					
	Residue +63° 40'					
3	Direct +61° 15'	0.8564	+64° 10'	+2° 95'	5.40 "	Oil of lemon <i>plus</i> 20 per cent. of terpene
	Distilled +60° 43'					
	Residue +61° 40'					
4	Direct +60° 40'	0.8589	+63° 45'	+3° 05'	5.65 "	Oil of lemon <i>plus</i> 20 per cent. of terpene and 2.00 per cent. gr. of oil
	Distilled +61° 10'					
	Residue +60° 00'					
5	Direct +61° 20'	0.8588	+64° 00'	+2° 80'	5.15 "	Oil of lemon <i>plus</i> 25 per cent. of terpene and 2.00 per cent. gr. of oil
	Distilled +61° 50'					
	Residue +61° 10'					
6	Direct +58° 10'	0.8585	+60° 60'	+2° 50'	4.85 "	Oil of lemon <i>plus</i> 30 per cent. of terpene and 2.4 per cent. gr. of oil
	Distilled +57° 50'					
	Residue +58° 20'					
7	Direct +57° 15'	0.8594	+59° 50'	+2° 35'	4.64 "	Oil of lemon <i>plus</i> 35 per cent. of terpene and 2.8 per cent. gr. of oil
	Distilled +57° 50'					
	Residue +56° 15'					
8	Direct +62° 00'	0.8587	+64° 30'	+2° 30'	4.21 "	Oil of lemon <i>plus</i> 40 per cent. of terpene and 3.10 per cent. gr. of oil
	Distilled +61° 45'					
	Residue +62° 10'					

for this purpose were analysed by me in their order as the samples were sent in for analysis, and when they were found genuine were subjected to various tests, with the results stated.

Of the experiments made, those of most interest so far as the value of the polariscopic process is concerned, were furnished by known mixtures of citral and limonene. For this purpose pure lemongrass citral was used. This was inactive to polarised light, and was obtained from Kahlbaum, of Berlin. The limonene used was from genuine lemon oil with the optical rotation of +66° 0' at 20° C. The tests were repeated at various times and under various temperatures, and in every case gave sufficiently satisfactory returns. The results obtained are shown in Table III.

bisulphite process of Soldaini and Berté. The concentrate when analysed gave the following results :

Rotary power at 15° C.	-9.20
Specific gravity	0.89750
Quantity of ester calculated as geranyl acetate	19.55 per cent.
Refractive index at 15° C. (Zeiss refractometer)	= 89

In determining the aldehydes the following modifications were used :

On 10 c.c. of deterpenated concentrate 100 c.c. of a saturated solution of potassium bisulphite was allowed to act in an Erlenmeyer flask of 250 c.c. capacity and heated

TABLE III.

Quantity of Limonene used	Quantity of added Citral of Lemongrass	α_D 20° of the Mixture	α_D 20° of the Terpene after Treatment with Potassium Bisulphite	Differences between the α_D 20° observed	Quantity of Citral Found	Quantity of Citral Estimated
19.8 c.c. Limonene	0.2 c.c. Citral	+65° 28'	+66° 0'	+6° 70'	1.10 per cent.	1.00 per cent.
19.6 " "	0.4 " "	+64° 70'	+66° 0'	+1° 30'	1.97 "	2.00 "
19.4 " "	0.6 " "	+64° 0'	+66° 0'	+2° 0'	3.04 "	3.00 "
19.2 " "	0.8 " "	+63° 30'	+66° 0'	+2° 70'	4.10 "	4.00 "
19 " "	1 " "	+62° 70'	+66° 0'	+3° 30'	5.00 "	5.00 "
18.8 " "	1.2 " "	+62° 0'	+66° 0'	+4° 0'	6.07 "	6.00 "
18.6 " "	1.4 " "	+61° 30'	+66° 0'	+4° 70'	7.13 "	7.00 "
18.4 " "	1.6 " "	+60° 70'	+66° 0'	+5° 30'	8.04 "	8.00 "
18.2 " "	1.8 " "	+60° 0'	+66° 0'	+6° 0'	9.10 "	9.00 "
18 " "	2 " "	+59° 30'	+66° 0'	+6° 70'	10.16 "	10.00 "

Finally I wish to give some results from a concentration of pure terpene kindly furnished by Santi di Pasquale & Figli. By these researches I desired to learn if in a pure

under the conditions above described. The separated essence was washed with distilled water, and after filtration 1.5 c.c. of geranyl acetate of most agreeable flavour was

obtained. It had a rotary power of -22.40° at 15° C. The refractive index of the geranyl acetate was $= 81^\circ$ at 15° C. (Zeiss refractometer), and the results obtained were:

No.	$\alpha_D 15^\circ$ Concentrate	$\alpha_D 15^\circ$ Residue from the Treatment with Potassium Bisulphite	Differences between the $\alpha_D 15^\circ$ Observed
1	$-9^\circ 30'$	$-22^\circ 40'$	$-13^\circ 10'$
2	$-9^\circ 30'$	$-22^\circ 40'$	$-13^\circ 10'$
3	$-9^\circ 30'$	$-22^\circ 37'$	$-13^\circ 07'$
4	$-9^\circ 30'$	$-22^\circ 40'$	$-13^\circ 10'$

From these results, and knowing the quantity of geraniol, we easily learn the quantity of citral absorbed by the bisulphite. From the formula given above and with the deviation of 22.40° at 15° C. we find that the volume of aldehydes present is 58.49 and 65.72 per 100 parts by weight. With the old Soldaini and Berté method by potassium bisulphite, and using the quantities above named (10 c.c. of concentrate of lemon per 100 c.c. of bisulphite-saturated solution), we obtain a diminution in the graduated pipette of 5.8 c.c.—i.e., the oil that has not combined with the bisulphite occupying the space of 4.2 c.c. From these figures we gather that the quantity of aldehydes is 65.16 per cent. by weight. Such a percentage was found in working with the concentrate of Messrs. Santi di Pasquale & Figli. I purpose making further tests with some other terpeneless concentrates, in order to establish what really may be the aldehyde-content generally found.

As has already been stated, the chemical analysis of oil of lemon may to-day be called more settled than ever, since the mass of the results obtainable before coming to a conclusion lead the analyst on to safe ground. But while a few years ago it appeared that fractionated distillation along with the polariscope might have completely solved the difficult problem of ascertaining the adulteration of the oil, to-day, owing to fresh methods of adulteration, it becomes necessary to find a more exact method of determining citral than that used hitherto. I trust that my process will be extensively tried, and that researches may be made with respect to the industrial yield of terpeneless concentrate, especially as to the scientific reasons for a yield so inferior to the figure obtained in chemical analysis.

Scientific Progress.

Temperatures under this heading are on the Centigrade scale.

Digalene.—Cloetta ("Pharm. Central," 1905, 23) has isolated from digitalis-leaves a substance which he has termed digalene, and which appears to be free from the disadvantages of the various other digitalis preparations. Digalene is a glucoside occurring in the form of a white amorphous powder, of the same empirical formula as digitoxine, the crystalline constituent. Digalene is also named "soluble digitoxine" by its discoverer. It is far more rapid in its action than digitoxine, on account of its easy solubility. The result of numerous physiological experiments shows that digalene possesses the therapeutic properties of digitalis-leaves to a very marked extent.

Origin of Atmospheric Formaldehyde.—Gautier, Henriot, and others have shown that the air of towns almost always contains formaldehyde. M. Auguste Trillat finds ("Bull. Soc. Chim.," 1905, iii, 33, p. 386) that this formaldehyde originates by the combustion of a great variety of organic materials such as wood, paper, coal, peat, petroleum, and tobacco. Small quantities of formaldehyde are produced by the combustion of these materials in glass tubes, and much larger quantities when they are burned in iron vessels as the result of the catalytic action of the metal; thus a kilogram of coal gave 7 mgms. of the aldehyde when burned in a glass tube and 250 mgms. when the combustion took place in an iron stove. Similarly the author traces the efficacy of burning sugar, juniper-berries, incense, and similar fumigating-agents to the presence of formaldehyde in the smoke. The aldehyde can readily be detected in town air by exposing slips of bibulous paper previously dyed with rosaniline hydrochloride; the paper develops a blue colour in the course of an hour or two when formaldehyde is present. In 100 cubic metres of air from the roof of the Pasteur Institute Trillat obtained 24 mgms. of formaldehyde, while a similar quantity of air tested half-way up the building yielded 31 mgms. and 100 cubic metres of air examined at Courbevoie, in the environs of Paris, gave as much as 55 mgms.

Medical Gleanings.

DIGIALEN.

is the name given to an aqueous solution of a white amorphous substance obtained from digitalis-leaves, which is stated to be both stable and to possess several advantages over other preparations of the drug. An account of it is given in the "B.M.J." "Epitome," p. 60.

SCOPOLAMINE AS AN ANÆSTHETIC.

At the meeting of the Paris Surgical Society last month Dr. Terrier reported on a case of unilateral pyonephritis with an extremely sensitive bladder in which he tried scopolamine anæsthesia. One injection produced a profound sleep during which a necessary operation was successfully carried out, the patient being unaware of it.

TREATMENT OF BOILS.

MR. PAUL RECLUS recommends spraying of the parts with a weak solution of perchloride of mercury (1-1,000), or carbolic acid (1-100), or peroxide of hydrogen, or, more frequently, boiled water. The spraying should continue for half-an-hour, and the region afterwards dried and an antiseptic ointment applied. Under this treatment the pain subsides, but returns in five or six hours, when the spraying should be repeated. Spraying should be done four or five times in the twenty-four hours. Under its influence the inflammatory zone becomes retracted, the boil bursts, and cure is rapid.

CINNAMON IN DYSENTERY.

STAFF-SURGEON G. T. BISHOP, of H.M.S. *Iphigenia*, writes in the "B. M. J." of the case of an able-bodied seaman who was treated in the Victoria Nursing Home, Shanghai, and for whom the usual remedies failed entirely to stop severe dysentery. The staff-surgeon then administered Chinese cinnamon freshly powdered in 60-grain doses every six hours, three drops of peppermint oil also being given on sugar for a distressful hiccough. The effect was magical. Within a few hours the man was taking nourishment and the hiccough soon stopped.

TURPENTINE IN INFLUENZA.

AN epidemic of influenza recently occurred in Germany, extending to horses, which were in some instances quarantined. The "Frankfort News" states that in 1890, when influenza was epidemic throughout Europe, many workmen contracted the disease in three watch-factories at Madretsch, and a number died. At one factory at Madretsch, however, the disease did not appear. Investigations showed that oil of turpentine was used in the turning of the metals used for watch cases, and the oil, becoming warm, evaporated, and the workmen inhaled the air laden with it. This seemed to protect them against the disease. Since then oil of turpentine has been always evaporated in that factory upon a stove, and not a case of influenza has ever occurred there. This preventive measure is successfully employed in dwellings, and the inhaling of water-vapour with oil of turpentine is said to act favourably on the affected respiratory organs.

PHENOLPHTHALEIN AS A PURGATIVE.

THE utility of this comparatively new purgative is commended by Dr. C. W. Buckley, of Buxton ("B. M. J.," 1905, 302), but he points out that in those prone to piles it generally provokes an attack after a few doses. He has had several cases in which this result was noted, although at first it was not directly connected with the phenolphthalein. The observation leads Dr. Buckley to say:

It would be of great advantage if medical men using new remedies would carefully note and place on record their drawbacks as well as their merits. Too often the remedy is allowed to drop if found unsatisfactory at first, and the eulogistic circulars of the manufacturing chemist are the only record of its pharmacology, though it must be admitted that perhaps the majority of new drugs which are nowadays produced in such bewildering variety deserve no better fate than to be forgotten, while much of their vogue is undoubtedly due to the defective teaching of the principles of treatment to the senior student, who is thus, in the earlier years of practice, at any rate, led to rely on the principles of therapeutics which he gathers from the copious "literature" so generously supplied by the drug companies, which appear to thrive especially in America.

